

19970724.qrp qrp-por0.796  
 >From owner-qrp-l@Lehigh.EDU Wed Jul 23 18:09 CDT 1997  
 >Received: from sco.theporch.com (sco.theporch.com [207.234.31.38])  
 > by uro.theporch.com (8.8.7.Beta2/A-UX-3.1.1) with ESMTTP id SAA29409  
 > for <shimshon@uro.theporch.com>; Wed, 23 Jul 1997 18:09:25 -0500 (CDT)  
 >Received: from fidoii.CC.lehigh.EDU (fidoii.CC.lehigh.EDU [128.180.1.4])  
 > by sco.theporch.com (8.8.7.Beta2/SCO-5.0.2-anti-spam) with ESMTTP id XAA05763  
 > for <shimshon@theporch.com>; Wed, 23 Jul 1997 23:09:10 GMT  
 >Received: from Lehigh.EDU ([127.0.0.1]) by fidoii.cc.Lehigh.EDU with SMTP id  
 <34881-30776>; Wed, 23 Jul 1997 19:04:35 -0400  
 >Date: Wed, 23 Jul 1997 19:04:22 EDT  
 >Sender: owner-qrp-l@Lehigh.EDU  
 >Precedence: bulk  
 >From: qrp-l@Lehigh.EDU  
 >To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>  
 >Subject: QRP-L digest 796  
 >Mime-Version: 1.0  
 >Content-Type: text/plain; charset=us-ascii  
 >X-Listprocessor-Version: 8.1 beta -- ListProcessor(tm) by CREN  
 >Message-Id: <97Jul23.190435edt.34881-30776+200@fidoii.cc.Lehigh.EDU>  
 >Status: 0

## QRP-L Digest 796

Topics covered in this issue include:

- 1) [23540] KEYERS with HW-8 and OHR-100  
by Ed Loranger <we6w@qsl.net>
- 2) [23541] SMD Capacitors et al  
by "J.B. Fox" <w5hir@mail.phoenix.net>
- 3) [23542] Re: Ham Sticks Ant?  
by Tim Gordish <tgordish@concentric.net>
- 4) [23543] Re: Flash Comm Inc. allowed to use spectrum  
by laura halliday <ve7ldh@direct.ca>
- 5) [23544] Re: SMD Capacitors et al  
by Monte Stark <ku7y@sage.dri.edu>
- 6) [23545] Re: SMD Capacitors et al  
by laura halliday <ve7ldh@direct.ca>
- 7) [23546] Re: SMD Capacitors et al  
by AE0Q V31RY <v31ry@ix.netcom.com>
- 8) [23547] Re: Tuners for Backpacking, etc  
by Cecil A Moore <Cecil\_A\_Moore@ccm.ch.intel.com>
- 9) [23548] Re: SMD Capacitors et al  
by AE0Q V31RY <v31ry@ix.netcom.com>
- 10) [23549] Re: Ham Sticks Ant?  
by Cecil A Moore <Cecil\_A\_Moore@ccm.ch.intel.com>
- 11) [23550] Re: Backpacking trip  
by herr@ridgecrest.ca.us (Michael Herr)

- 12) [23551] ZM-1  
by Norm Melick <henmel@worldnet.att.net>
- 13) [23552] Re: Sterba Curtain Antenna  
by SEAB&SHARON LYON <SSLYON@worldnet.att.net>
- 14) [23553] re : 2N7000 Help (or Murphy brought badgers  
by Dan Tayloe-P26412 <Dan\_Tayloe-P26412@email.mot.com>
- 15) [23554] Cap/coil combo's  
by ka8ddz <hynde@flash.net>
- 16) [23555] Mica versus silicone rubber insulators  
by Bill Carver <bcarver@magiclink.com>
- 17) [23556] Dual Gate MOSFETS  
by Bill Meara <wmeara@erols.com>
- 18) [23557] Re: ZM-1  
by Dan Hogan <dhhogan@lightside.com>
- 19) [23558] Re: Wanted: Mnemonic for color code  
by ke3fl@juno.com (Philip Karras)
- 20) [23559] QQ  
by af852@rgfn.epcc.Edu (William R Colbert)
- 21) [23560] DX on 20 on 7/23/97  
by "Wilford D. Lindsey" <70511.3041@compuserve.com>
- 22) [23561] Re: Brass Revisited  
by "Phoenix Crystals" <phxtal@nava-link.net>
- 23) [23562] Re:DX on 20 on 7/23/97  
by "Wilford D. Lindsey" <70511.3041@CompuServe.COM>
- 24) [23563] Survey results  
by JFKluender@aol.com
- 25) [23564] Re: UPS Batteries  
by ka7you@juno.com
- 26) [23565] Key Question  
by c0k@bellatlantic.net
- 27) [23566] Re: UPS Batteries  
by kd7s@psnw.com (Bill Jones)
- 28) [23567] Spokane Area QRPers  
by "Dennis B. Dolle" <dolledb@cet.com>
- 29) [23568] Re: ZM-1  
by ARDUJENSKI@aol.com
- 30) [23569] Re: UPS Batteries  
by Chris Cartwright <ccart@dns.vidtel.com>
- 31) [23570] Resonant Speakers  
by n4so@juno.com (charles k brown)
- 32) [23571] Re: ZM-1  
by Ken Lopez <kjlopez@earthlink.net>
- 33) [23572] RE: KH6AFS/QRP info  
by Harvey Hetland <n6mm@earthlink.net>
- 34) [23573] Re: Dual Gate MOSFETS  
by Chris Trask <ctrask@primenet.com>
- 35) [23574] Re:DX on 20 on 7/23/97  
by Alan Kaul <kaul@netcom.com>

- 36) [23575] Re:DX on 20 on 7/23/97 (fwd)  
by Alan Kaul <kaul@netcom.com>
- 37) [23576] Re: Cap/coil combo's  
by Leon Heller <leon@lfheller.demon.co.uk>
- 38) [23577] Re: Dual Gate MOSFETS  
by Leon Heller <leon@lfheller.demon.co.uk>
- 39) [23578] Argo 509. The First Question.  
by G4YND@aol.com
- 40) [23579] Re: re : 2N7000 Help (or Murphy brought badgers  
by Arjen Raateland <Arjen.Raateland@vyh.fi>
- 41) [23580] UPS Batteries  
by Dave Marling <dbm@klis.com>
- 42) [23581] Re: ZM-1  
by Dave Marling <dbm@klis.com>
- 43) [23582] KH7 on 7.119  
by Chris Cartwright <ccart@dns.vidtel.com>
- 44) [23583] Re: ZM-1  
by FAITHD@dnr.state.wi.us (Don C. Faith III, AM/7, \ (608\ ) 267-3135)
- 45) [23584] CODE-BOY KEYERS  
by "GREG " <KB2QQM@msn.com>
- 46) [23585] Re: Dual Gate MOSFETS  
by Zack Lau <zlau@arrl.org>
- 47) [23586] VLF Receiver - Comparator  
by "James R. Johns" <jrjohns@mitre.org>
- 48) [23587] email address for KD1JV  
by Joseph Trombino jr <joebarb@wilmington.net>
- 49) [23588] Re: Argo 509. The First Question.  
by Robert Everitt Heiss <rheiss@volta.ee.calpoly.edu>
- 50) [23589] Re: Gelled Cell Batteries / Chargers  
by K5BDZ@aol.com
- 51) [23590] Re: Dual Gate MOSFETS  
by K5BDZ@aol.com
- 52) [23591] Digital PSU  
by "W. Daniel, 9V1ZV" <daniel@pandora.lugs.org.sg>
- 53) [23592] Making holes in aluminum; floating 3.5mm phone jacks  
by gsurrency@juno.com (Gary L L Surrency)
- 54) [23593] San Diego Next week  
by Martin Squicciarini <skitch@resuba.com>
- 55) [23594] Re: VLF Receiver - Comparator  
by mark.milburn@commonlink.com (Mark Milburn)
- 56) [23595] Re: KH6AFS/QRP 40m  
by Ed Loranger <we6w@qsl.net>
- 57) [23596] Re: VLF Receiver - Comparator  
by Chris Trask <ctrask@primenet.com>
- 58) [23597] Re: KH6AFS/QRP 40m  
by Jim W7LS <w7ls@brigadoon.com>
- 59) [23598] CALLS2DIST via qrp-l listserver  
by John Evans - N0HJ <jaevans@codenet.net>

- 60) [23599] Flash Comm URLs  
by laura halliday <ve7ldh@direct.ca>
- 61) [23600] Re: KH6AFS/QRP 40m  
by Ed Loranger <we6w@qsl.net>
- 62) [23601] Re: CALLS2DIST via qrp-l listserver  
by Jim Eshleman <lujce@hooch.CC.Lehigh.EDU>
- 63) [23602] RE: Flash Comm Inc. allowed to use spectrum  
by "Ed Manuel" <n5em-qrp@msn.com>
- 64) [23603] CALLS2DIST now operational  
by John Evans - N0HJ <jae@codenet.net>
- 65) [23604] Technical/Math Books For Sale  
by Chris Trask <ctrask@primenet.com>
- 66) [23605] Re: Flash Comm Inc. allowed to use spectrum  
by W3GX@aol.com
- 67) [23606] Re: Ham Sticks Ant?  
by haf47@juno.com (Howard Friedman)
- 68) [23607] Re: ZM-1  
by The Boices <boice@bigfoot.com>
- 69) [23608] QRPp  
by af852@rgfn.epcc.Edu (William R Colbert)
- 70) [23609] Re: QRP Quarterly Arrived - NE-QRP '72' Dead?  
by k5zty@juno.com (WILLIAM A STIETENROTH)
- 71) [23610] As Promised: RESONANT SPEAKERS for CW!  
by Ed Loranger <we6w@qsl.net>
- 72) [23611] Hamfests and Conventions this w/e  
by n4oln@juno.com
- 73) [23612] Re: As Promised: RESONANT SPEAKERS for CW!  
by Ed Loranger <we6w@qsl.net>
- 74) [23613] Re: Ham Sticks Ant?  
by "Harold Brian Robinson" <robinson@plhp002.comm.mot.com>
- 75) [23614] Ease of making contacts proportional to power?  
by Jim Glover <psykey@okcforum.org>
- 76) [23615] Re: UPS Batteries  
by Hank Kohl <k8dd@contesting.com>
- 77) [23616] Re: Ease of making contacts proportional to power?  
by Ed Loranger <we6w@qsl.net>

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Date: Tue, 22 Jul 1997 16:04:36 -0700  
From: Ed Loranger <we6w@qsl.net>  
To: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>  
Subject: [23540] KEYERS with HW-8 and OHR-100  
Message-ID: <33D53C84.31F2@qsl.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Granted I'm using a borrowed Homebrew electronic Keyer so I'm doing the best I can with my limited information on the circuit. (Black Box Approach).

The HW-8 initially did not respond to the keyer. I reversed the keyer output leads and it worked. The OHR-100 did not work with the reversed leads, so connected leads in the expected manner when using the OHR-100.

Extreme BC Band interference came from the Keyer when connected to the OHR-100, less so with the HW-8.

OK: I want a proper connection that works for the HW-8 and the OHR-100. NO obnoxious BC interference.

WHAT I FOUND: The keyer saturates the output transistor to .735 volts on the keyed line. This should work on both rigs. I found that the original builder connected the Phono Jack in the usual way-- ground to ring, keying line to Tip. THIS IS WRONG for the HW-8. The phone jack on the HW-8 is insulated from the chassis, and ground is supposed to be connected to TIP. The RING is the keyed line!

Now the HW-8 works! BUT -- When I tune for best match and operate to a nearby antenna it locks up and holds tone. But the Antenna relay doesn't click over. I suspected a near-on-bias condition on the keying transistor of the HW-8 so I inserted a 200 Ohm resistor into the keying output of the keyer. This stopped detection of a nearby Strong signal and the 'False' keying of the rig.

HW-8 Summary FIX: 200 ohm resistor placed at the keyed output. HW-8 Output jack wired per schematic. (The schematic is right.) Now the HW-8 works perfectly.

The OHR-100 also succumbed to false keying from the keyer, presumably when the keyer detected strong signals close-by. The 200 Ohm resistor solved this one too!

I find nothing wrong with either designs of the HW-8 or the OHR-100. But I do think it very possible others have wired their HW-8 Key jack improperly.

Remember the HW-8, when operated via electronic keyer, should have the Sleeve (Ring) keyed. That is the way it was designed. The tip is grounded. And the sleeve is insulated via fiber washers as supplied by Heathkit.

I believe I was detecting the BC Interference in the keyer, and passing it to the rigs. The 200 ohm resistor appears to solve this problem well.

Haven't figured out why the keyer sends if a common ground from the HW-8 or OHR-100 touches the keyer case.

But everything works FB right now. I thought this information would be useful to the group.

(Hey, gotta get some mileage out of troubleshooting and digging through the schematics - eh?)

Good Bandwidth, I hope.  
-Ed Loranger

--

72/73 de we6w qrp es cw ONLY (From non-ham to extra in one day!)  
HW-8;OHR-100, Pixie2, Johnson Viking II w/VFO.  
QRP-L#1068/Norcal#2227/ARS#275/ARCI#9397 grid CM88ok  
mailto:we6w@qsl.net <http://www.qsl.net/we6w>

-----  
Date: Tue, 22 Jul 1997 18:12:36 -0500  
From: "J.B. Fox" <w5hir@mail.phoenix.net>  
To: qrp-l@Lehigh.EDU  
Subject: [23541] SMD Capacitors et al  
Message-ID: <199707222319.SAA24346@raid2.fddi.phoenix.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

HI!... got a question about surface mounted capacitors and other smd devices.

Is there a reason to the numbering system on the little beasts?? Where is there a guide book, treatise, epistle or sandscrit covering this wonder to electronics??

Please, some of you please come to the rescue of this poor ol' mental cripple...HI!

regards,

Foxy w5hir@mail.phoenix.net

-----  
Date: Tue, 22 Jul 97 16:17:52 +0700  
From: Tim Gordish <tgordish@concentric.net>  
To: <GBB1@MARISTB.MARIST.EDU>, "qrp-1" <qrp-1@Lehigh.EDU>  
Subject: [23542] Re: Ham Sticks Ant?  
Message-ID: <199707222317.TAA04113@cliff.concentric.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="US-ASCII"

Fr Bowes and Other QRP Folk,

I too have used a 40 meter hamstick dipole with some success. I was the Novice fox a couple of times running an Atlas and 5w and made plenty of contacts when the band was good. A full size dipole works better. The bandwidth of 40 meters was about 100 khz.

Joe has been using hamsticks in another configuration which sounds interesting. Maybe he could post a description of his hamstick antenna array.

BTW what kind of a name is Fr?

72

Tim & Aretta Gordish  
KB9LGJ & N0YDG  
Yuma, AZ

QRP-L #457, ScQRPion #25, IDEA, ARRL  
Rigs: 38-S, 20m-SST  
WAS on 30m: 20 confirmed

\*\*All the nations may walk in the name of their gods, we walk in the name of the Lord our God for ever and ever" Micah 4:5\*\*

-----  
Date: Tue, 22 Jul 1997 16:12:59 -0700  
From: laura halliday <ve7ldh@direct.ca>  
To: qrp-1@Lehigh.EDU

Subject: [23543] Re: Flash Comm Inc. allowed to use spectrum  
Message-ID: <33D53E7B.6350CDF4@direct.ca>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Harumph!

Being the rational sort I am, I went for a wander around the net to see what I could find out about Flash Comm. The relevant URLs are:

<http://www.flashcomm.com>

and

<http://www.gcc.gov/bureaus/wireless/orders/1997/da971451.txt>

The former is Flash Comm's home page, with details of what they're up to (it actually sounds interesting). The latter is the FCC Order that sets out exactly what they're allowed to do - including Appendix C, the frequencies they've been assigned by the FCC. It's quite a list, so I won't reproduce it here. But none are even close to our bands, being in Fixed Service allocations.

Speculation is no substitute for facts!

--

Laura Halliday	"C'est une femme mutine, assez elegante,
ve7ldh@direct.ca	grave et legere, ayant le sens
Grid: CN89mg	du confort et du plaisir en tout."
	- C. Deneuve

-----  
Date: Tue, 22 Jul 1997 16:31:47 -0700 (PDT)  
From: Monte Stark <ku7y@sage.dri.edu>  
To: "J.B. Fox" <w5hir@mail.phoenix.net>  
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>  
Subject: [23544] Re: SMD Capacitors et al  
Message-ID: <Pine.SUN.3.90.970722162803.28441B-1000000@vortex>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi Foxy,

While I was getting some good instructions from Kathy



and Dick from S&S, they cautioned me not to get the little SMD parts mixed up because they are not marked!

>From what little I've seen, the numbers have little to no meaning for the builder.

cul,

73, Ron,        SOWP 5545M,

.....KU7Y.....ARCI #8829.....Monte "Ron" Stark.....  
....ku7y@sage.dri.edu.....Washoe Lake, Nevada....  
....QRP-L #17...ARS #49...NorCal #330.....NRA LIFE.....

-----  
Date: Tue, 22 Jul 1997 16:32:14 -0700  
From: laura halliday <ve7ldh@direct.ca>  
To: qrp-l@Lehigh.EDU  
Subject: [23545] Re: SMD Capacitors et al  
Message-ID: <33D542FE.29804869@direct.ca>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

J.B. Fox wrote:

>  
> HI!... got a question about surface mounted capacitors and other  
> smd devices.  
>  
>        Is there a reason to the numbering system on the little  
> beasts?? Where is there a guide book, treatise, epistle or sandscrit  
> covering this wonder to electronics??

If they're numbered (not all are):

Resistors are significant digits + multiplier - e.g. 472 is 4700 ohms, or 4k7.

Capacitors: a code documented in the ARRL Handbook, among other places. e.g. A5 = 0.1 uF, S1 = 47 pF.

Active devices: ICs have their full part number if it will fit, otherwise an abbreviated code (e.g. M2401 = MRFIC2401). Others (including transistors, diodes, etc.) have codes set by their manufacturers, which you can find in datasheets and manuals. Examples include 5D = MMBD914 and 1P = MMBT2222.

Motorola have a small-signal device selection guide (check their web site) that documents the markings (among other things) of pretty well all the discrete transistors and diodes of interest to hams.

--

Laura Halliday                "C'est une femme mutine, assez elegante,  
ve7ldh@direct.ca    grave et legere, ayant le sens  
Grid: CN89mg        du confort et du plaisir en tout."  
                              - C. Deneuve

-----  
Date: Tue, 22 Jul 1997 17:39:40 -0600  
From: AE0Q V31RY <v31ry@ix.netcom.com>  
To: w5hir@mail.phoenix.net, qrp-1@Lehigh.EDU  
Subject: [23546] Re: SMD Capacitors et al  
Message-ID: <2.2.16.19970722233940.344fde7c@popd.ix.netcom.com>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

At 18:12 22-07-97 -0500, W5HIR wrote:

>HI!... got a question about surface mounted capacitors and other  
>smd devices.  
>  
>        Is there a reason to the numbering system on the little  
>beasts?? Where is there a guide book, treatise, epistle or sandscrit  
>covering this wonder to electronics??  
>

Capacitors and resistors use the military way of numbering the value..

101 = 100 ohms        The last number is how many zeros to add to the  
103 = 10k ohms       first two digits.  
472 = 4.7k

With capacitors the last digit is also the place number in pf.

101 = 100pf  
223 = .22uf  
105 = 1uf

The easy way to figure out caps in your head is count the places of the number (102 = 4 places), and compare them to 6, which is how many you always put to the right of the decimal. So 102 puts the first significant digit of the value after two zeros to the right of the decimal (total places always

equals 6), and 102 = .001uf

It's easier to do than explain!

Or you can make a chart, hi..

73 -- Glenn

-----  
Another month ends... All targets met, all systems  
working, all customers satisfied, all staff eager and  
enthusiastic. All pigs fed and ready to fly.

AE0Q / V31RY ex: GM5BKC, ZB2WZ, SV0WY, WA0VPK  
v31ry@ix.netcom.com --SOWP 5558-M, QCWA LM, ARRL LM, NCVA--  
<http://www.qsl.net/ae0q>

-----  
Date: Tue, 22 Jul 97 16:47:00 PDT  
From: Cecil A Moore <Cecil\_A\_Moore@ccm.ch.intel.com>  
To: qrp-1@Lehigh.EDU  
Subject: [23547] Re: Tuners for Backpacking, etc

>From: Joe Gervais <vole@primenet.com>  
>AB7RU was asking about small, portable tuners, and  
>I ran across the one I was thinking of.

Hi Joe, Are you coming to Ft. Tuthill? I'm going to show how  
to put up a horizontal dipole that doesn't need a tuner.

73, Cecil, W6RCA, 00TC

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Date: Tue, 22 Jul 1997 17:49:45 -0600  
From: AE0Q V31RY <v31ry@ix.netcom.com>  
To: qrp-1@Lehigh.EDU  
Subject: [23548] Re: SMD Capacitors et al  
Message-ID: <2.2.16.19970722234945.36d7a5d2@popd.ix.netcom.com>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

I wrote:  
>With capacitors the last digit is also the place number in pf.  
>  
>101 = 100pf

>223 = .22uf  
>105 = 1uf  
>  
>The easy way to figure out caps in your head is count the places of the  
>number (102 = 4 places), and compare them to 6, which is how many you always  
>put to the right of the decimal. So 102 puts the first significant digit of  
>the value after two zeros to the right of the decimal (total places always  
>equals 6), and 102 = .001uf  
> It's easier to do than explain!  
>  
>Or you can make a chart, hi..  
>

Whoops, I made a mistake in my own list!

A capacitor labeled 223 is .022uf, not .22uf.

Sorry about that.

73 -- Glenn AE0Q/V31RY

-----  
Date: Tue, 22 Jul 97 16:56:00 PDT  
From: Cecil A Moore <Cecil\_A\_Moore@ccm.ch.intel.com>  
To: qrp-1@Lehigh.EDU  
Subject: [23549] Re: Ham Sticks Ant?

>From: "Bowes, Fr. Bruce" <GBB1@MARISTB.MARIST.EDU>  
>Anybody tried Ham Sticks as an dipole?

Hamsticks work relatively well as a dipole for 10m-20m.  
On 80m, a Hamstick is about 1% efficient which means 99%  
of one's power doesn't get radiated. Low band mobile  
operation is a choice among evils. Low band fixed operation  
is not limited to poor choices, like Hamsticks.

73, Cecil, W6RCA, OOTC

-----  
Date: Tue, 22 Jul 1997 17:23:09 -0800  
From: herr@ridgecrest.ca.us (Michael Herr)  
To: qrp-1@Lehigh.EDU

Subject: [23550] Re: Backpacking trip  
Message-ID: <v01530500affb0d0d6b36@[199.120.150.93]>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Auugh! We got rained out today on the backpacking trip (yeah, it never rains in the desert!) So we will try again tomorrow. Should be on 7040 on Wednesday afternoon, all day thursday and friday morning.

72

Mike WA6ARA  
es  
Paula N6VGW

-----  
Date: Tue, 22 Jul 1997 17:21:08 -0700  
From: Norm Melick <henmel@worldnet.att.net>  
To: QRP-L <qrp-l@Lehigh.EDU>  
Subject: [23551] ZM-1  
Message-ID: <33D54E74.74C6@worldnet.att.net>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

For my next project, I am looking at the ZM-1 Auto tuner by Emtech. Does anybody out there operate one and could advise me how they like it? Also, any building experiences would be appreciated.

Thanks alot,

Norm

-----  
Date: Wed, 23 Jul 1997 00:24:54 +0000  
From: SEAB&SHARON LYON <SSLYON@worldnet.att.net>  
To: we6w@qsl.net, qrp-l@Lehigh.EDU  
Subject: [23552] Re: Sterba Curtain Antenna  
Message-ID: <19970723002452.AAA713@LOCALNAME>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

I've duplicated the Sterba right out of the '96 A-Ra-Ra-El Ant. Hbk. and am absolutely delighted. They publish "typical"

E & H -plane plots that are helpful, if not definitive. I'd advise that you get a set of Sterba's for the bands you want most and experiment. My garage has six grape-crates from the local market which contain pre-cut, ring-lug-terminated segments for 30, 20, 17, 15, 12, and 10M STERBAS. Home made 600-ohm phasing lines included. They get bolted together with 8-32x 1/4" cad-plated hardware and THEY ALL WORK GREAT!!! =s=

.....

At 08:43 PM 7/22/97 +0000, you wrote:

>Hopefully someone will model the Sterba curtain.

>

>On My Web Page, (Follow Antenna Link)

>I've "Just NOW" added additional Beam and gain

>notes derived from my old 1974 Antenna book.

>

>Sorry no fancy dwgs. But Text works.

>

>Anyone want to model the Sterba with a mean height

>of 3/4 wavelengt above ground?

>

>Some Random frequency like 14.06 MHz.

>

>Guffaws!

>

>-Ed L.

>--

>72/73 de we6w qrp es cw ONLY (From non-ham to extra in one day!)

>HW-8;OHR-100, Pixie2, Johnson Viking II w/VFO.

>QRP-L#1068/Norcal#2227/ARS#275/ARCI#9397 grid CM88ok

>mailto:we6w@qsl.net <http://www.qsl.net/we6w>

>

>

"Seab" Lyon -- AA1MY

Bethel, CT; USA FN-31-HJ

ARCI #9253; QRP-L # 574

NEQRP# 511; ARRL; QCWA;

C.A.R.A.

-----

Date: Tue, 22 Jul 1997 17:24:00 -0500

From: Dan Tayloe-P26412 <Dan\_Tayloe-P26412@email.mot.com>

To: ccart@dns.vidtel.com, qrp-l@Lehigh.EDU

Subject: [23553] re : 2N7000 Help (or Murphy brought badgers

Message-ID: <M966691.005.qxbk6.1.970723002850Z.CC-MAIL\*/OU=SATCG/OU=AZBH/PRMD=MOT/

ADMD=MOT/C=US/@MHS>

>Ooops, snapped a leg off squeezing it in :( I only have J305's  
>and 2N5555 in the parts bin, can I sub one of these? Is there  
>a non-FET work around, even if it does cost me some milliamps  
>until I restock on the 7000's?

Chris:

A J305 or 2N5555 does not have the low "on" resistance that the 2N7000 has. However, I believe that Radio Shack now carries these. At least I \*think\* I saw them the last time I was in. Alternatively, you might try an (overkill) IRF510 or IRF511. RS carries these for sure.

A final alternative is to use a PNP pass transistor for the keying circuit. The Serria uses (or used to use) something like a generic 2N3905 or 2N4402 or 2N4403. Look in the ARRL handbook (1996 or 97) for the schematic.

- Dan Tayloe, N7VE, Phoenix, AZ, QRPL #696, Az ScQRPions

-----  
Date: Sun, 22 Jun 1997 20:33:11 -0700  
From: ka8ddz <hynde@flash.net>  
To: qrp-l@Lehigh.EDU  
Subject: [23554] Cap/coil combo's  
Message-ID: <33ADEE77.7B88@flash.net>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Wishing now I would have finished Electrical Engineering...Im preparing to embark on my first 100% scratch endeavor, bits and pieces from different schematics I've seen. And a couple questions came to mind.

While making something like a tuned input for a front end, is there a ratio of capacitance vs inductance that should be followed? For example a coil with 10 turns and a capacitor or say 30 turns and a different capacitor. What effect does this have?

Another question was, I see alot of NE602's used as occilators and the xtal usually has a 10-20 microhenry inductor in line. Is this value critical? How is it used.

73, Tim, ka8ddz

-----  
Date: Tue, 22 Jul 1997 20:50:57 -0400  
From: Bill Carver <bcarver@magiclink.com>  
To: qrp-1@Lehigh.EDU  
Subject: [23555] Mica versus silicone rubber insulators  
Message-ID: <199707230050.UAA18620@nss2.CC.Lehigh.EDU>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Hi Gary,

The silicone rubber insulators (one tradename: "Silpad") work well and don't require thermal grease. They cost more than mica, which is why they aren't universally used; sometimes they can't be salvaged in one piece from surplus equipment. I used them in all the equipment we made at Scantron.

NOT using heat sink grease increases the thermal resistance by many 100's of percent. You might do better just standing the semiconductor up and blowing on it. Seriously, if you're using mica or Kapton-film (sheet plastic) insulators don't leave the grease off; that's asking for trouble, and Mother Nature will be more than happy to give it to you.

DigiKey has SilPads, five for \$0.61. Twelve cents each, about twice as expensive as mica.

Regards - Bill - W7AAZ

-----  
Date: Tue, 22 Jul 1997 21:32:17 -0400  
From: Bill Meara <wmeara@erols.com>  
To: qrp-1@Lehigh.EDU  
Subject: [23556] Dual Gate MOSFETS  
Message-ID: <199707230134.VAA15567@smtp3.erols.com>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Fellow QRPers:



Our literature is filled with receivers built around dual gate MOSFETS like the 40673 and the 3N211. I recently built a 20 meter superhet that used these components in mixer and product detector circuits. During my 'parts gathering phase' I was surprised by how difficult it was to find these parts. I understand that they may be out of production.

Is anyone making dual gate MOSFETS anymore? If not, what are the implications for homebrewers who like to use discrete components? How many of these wonderful devices were built? Is there a stock of them out there? Might we find ourselves in a situation where its easier to find a 12AX7 tube than it is to find a dual gate MOSFET?

I had a lot of fun building the receiver and am worried that the parts that made this project possible might be in the endangered species category! Tell me it isn't so!

73 de N2CQR  
Bill Meara  
QTH: Falls Church, Virginia, USA  
Formerly of Tegucigalpa, Bilbao and Santo Domingo  
wmeara@erols.com  
<http://www.mindspring.com/~johnmb/billm.htm>

-----  
Date: Tue, 22 Jul 1997 18:31:45  
From: Dan Hogan <dhhogan@lightside.com>  
To: qrp-1@Lehigh.EDU  
Subject: [23557] Re: ZM-1  
Message-ID: <3.0.1.16.19970722183145.2eff77ba@mail.lightside.com>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Norm:

I'm using one for my shack QRP tuner. Don't have any complaints, tunes my Tri-Loop 40m on 80, 40, 30, 20, and 10 meters. Thinking about getting one for field use.

At 17:21 7/22/97 -0700, Norm Melick wrote:

>For my next project, I am looking at the ZM-1 Auto tuner by Emtech.  
>Does anybody out there operate one and could advise me how they like  
>it? Also, any building experiences would be appreciated.  
>  
>Thanks alot,  
>

>Norm

72/73

Dan Hogan WA6PBY QRP-L #558, CQC #340, NorCal #1806,  
dhhogan@lightside.com ARRL, ARCI #3847, G-QRP #9533, FISTS #2949  
Lat. 34d 03.5'N Lon. 117d 56.0'W Grid: DM84wc

-----  
Date: Tue, 22 Jul 1997 22:07:52 EDT  
From: ke3fl@juno.com (Philip Karras)  
To: mgemm@mtechnologies.com, qrp-l@Lehigh.EDU  
Subject: [23558] Re: Wanted: Mnemonic for color code  
Message-ID: <19970722.220740.7631.2.ke3fl@juno.com>

I never liked that one from 20 yrs ago either. Most of the one's sent to the QRP-L group were pretty good. The easiest one for me was the one about Violet winning :-)

"Big Boys Race Our Young Girls But Violet Generally Wins"

here's the one I came up with:

Beautiful Blonds Really Organize Your Group Be Very Greatful Wally

73 & 72 de KE3FL  
Phil K

-----  
Date: Tue, 22 Jul 97 20:17:38 MDT  
From: af852@rgfn.epcc.Edu (William R Colbert)  
To: qrp-l@Lehigh.EDU  
Subject: [23559] QQ  
Message-ID: <9707230217.AA16421@rgfn.epcc.Edu>

Received my Quarterly yesterday and a fine publication it is, again. had to stop what I was doing and go thru it immediately. Thanks to All the gang at the Quarterly for all the efforts. Hope to see the pony express from the west with QRPp before too much longer - qrp publications are the best sunscreen protection - keeps one inside reading and experimenting rather than out in the hot sun. 73 all

--

Ray Colbert, W5XE  
00TC 3618, SOWP 1064M  
El Paso, Tx (Far West Texas)  
(also: v31xe@dzn.com)

-----  
Date: 22 Jul 97 22:26:50 EDT  
From: "Wilford D. Lindsey" <70511.3041@compuserve.com>  
To: QRP-L Discussion Group <QRP-L@Lehigh.EDU>, "W.D. (Doc) Lindsey/K0EVZ"  
<70511.3041@compuserve.com>  
Subject: [23560] DX on 20 on 7/23/97  
Message-ID: <970723022650\_70511.3041\_IHD71-3@CompuServe.COM>

Gang:

Promised I would not give contemporaneous reports...but I can't help it tonight. Because 30 metres is alive and wide open.

Just worked Karel OK2FD in the Czech Republic just now with a Sierra at 2 watts into the TNT/2 Windom at about 27'. He was 589 and he gave me 359. Freq = 10114.2. Time = 0105Z (7/24/97).

At 0005Z (7/24/97) worked AB5XP with my 38S. Output was only 300 Mw into the TNT/2 Windom. He was a solid 589, I was 359.

BTW, last night (7/23/97,0446Z) worked Sam KH6AFS on 14057.2. He was running 2 full watts (!) into his rhombic high up. I gave him a 589, he gave me a 539. My rig = TenTec Argosy 525 at 5 watts into the Windom.

So....if you have been feeling that 30 has been sort of dead...get on there now. I have heard an F3 and several DX...along with LOTS of USA stations. Good luck.

72/73,

--Doc/K0EVZ qrp-l 861 norcal 2050 cqc 414 mn-qrp 19 nj-qrp 69 ak/qrp 139  
ARCI 9398 ARRL WAS 49/38 DXCC 48/39 <><

-----  
Sierra Argosy 525 Argo 515 HW-9 Explorer II-40 SW-30 Norcal 40a  
Emtech 40-40 SW-40 TT 1340 A&A Gary Breed 30 49er 38S Mercury  
Paddles MFJ 259 MFJ 941D TNT/2 Windom SLV/W6MMA HB G5RV  
Autek QF-1 RS DSP-40

"Things should be as simple as possible, but no simpler"--A. Einstein

-----  
Date: Tue, 22 Jul 97 20:19:33 PDT  
From: "Phoenix Crystals" <phxtal@nava-link.net>  
To: mgemm@mtechnologies.com, "Low Power Amateur Radio Discussion" <grp-1@Lehigh.EDU>  
Subject: [23561] Re: Brass Revisited  
Message-ID: <MAPI.Id.0016.00687874616c20203030303630303036@MAPI.to.RFC822>  
MIME-Version: 1.0  
Content-Type: text/plain; charset="ISO-8859-1"; X-MAPIextension=".TXT"  
Content-Transfer-Encoding: 7bit

Well I guess it's time I started advertising ANTENNA GREASE again. One application on the antenna radiator, either wire or tubing and the electrons accelerate off the dude! Going at the SPEED OF LIGHT!

73 John

-----  
> Hi, Chuck & Gang--  
>  
> >>Got some email from a few ex-Army people who spent years  
> using Brasso on all the brass they had on uniforms etc.  
> No stories confirmed on destruction of government  
> property using Brasso. :-)  
> <<  
>  
> Well, maybe they weren't as "STRAC" as they might have been. During  
> my brief tenure as a "latrine queen" at Lackland AFB in 1969 we  
> actually switched from generic GI metal polish to brasso for the sink  
> faucets because ALL of the chrome plating had been polished off over  
> the years and they had become brass fittings!  
>  
> >>All the chemicals do is remove a layer of oxide which is some  
> unknown number of molecules (assumed to be a relatively small number  
> in the cosmic realm of things).  
> <<  
>  
> OK, but lets talk about what that small layer of oxide does-- it  
> protects the metal! With both copper and brass, the oxide layer  
> prevents oxygen from going beyond a certain depth. The moment you  
> remove it, oxidation begins again and builds up to the same level and  
> then stops. I think I remember someone on this list inquiring about  
> removing the oxidation from copper antenna wire-- BIG waste of time.

> The effect of oxidation on stranded copper antenna wire is negligible  
> (and NOT related to DC conductivity between the strands, anyhow), and  
> I suspect you'd have to polish your antenna every couple of weeks if  
> you wanted to keep it shiny bright.  
>  
> Once the material has been polished, the only way to stop it from  
> tarnishing again is to put it in an oxygen free environment (e.g.  
> nitrogen filled display case) or coat it with a clear finish such as  
> lacquer (I think you described removing a layer of that, didn't  
> you?).  
>  
> The oxide coloration even has attractive names in some environments--  
> words like verdigris and patina come to mind. And FWIW it's a mortal  
> sin among numismatists to polish a coin.  
>  
> When it comes to things like old keys it's your choice whether to  
> polish it back to factory new condition, but if you do you will have  
> to make some choices-- the natural sheen of new metal is not going  
> to last unless you coat it (in which case you don't have a "natural"  
> shine anymore), or unless you are prepared to polish it relatively  
> frequently. My own inclination in these cases is to either leave it  
> alone, or polish it once and let it go "back to nature."  
>  
> Listen UP you animals. There will be a key inspection at 0600. What  
> did you polish that key with, Smith, a HERSHEY BAR? I  
> want to see your MOTHER'S reflection in those keys. DISSmissed.  
>  
> [oops, better take my pill]  
>  
>  
>  
>  
> 73  
> Marshall Emm  
> N1FN/VK5FN  
> n1fn@mtechnologies.com  
> <http://www.mtechnologies.com/mthome>  
> (303)752-3382  
> --  
>

-----  
Date: 22 Jul 97 23:04:12 EDT  
From: "Wilford D. Lindsey" <70511.3041@CompuServe.COM>  
To: QRP-L Discussion Group <QRP-L@Lehigh.EDU>, "W.D. (Doc) Lindsey/K0EVZ"

<70511.3041@CompuServe.COM>

Subject: [23562] Re:DX on 20 on 7/23/97

Message-ID: <970723030411\_70511.3041\_IHD70-1@CompuServe.COM>

Gang:

Nuts. Was in too much of a hurry...so I accidentally added an extra day to the UTZ in every entry. Sorry for the confusion and wasted BW.

But 30 metres is \*still\* jumping at this QTH (Rochester, MN). Good luck, everyone!

72/73,

--Doc/K0EVZ qrp-1 861 norcal 2050 cqc 414 mn-qrp 19 nj-qrp 69 ak/qrp 139  
ARCI 9398 ARRL WAS 49/38 DXCC 48/39 <><

-----  
Sierra Argosy 525 Argo 515 HW-9 Explorer II-40 SW-30 Norcal 40a  
Emtech 40-40 SW-40 TT 1340 A&A Gary Breed 30 49er 38S Mercury  
Paddles MFJ 259 MFJ 941D TNT/2 Windom SLV/W6MMA HB G5RV  
Autek QF-1 RS DSP-40

"Things should be as simple as possible, but no simpler"--A. Einstein

-----  
Date: Tue, 22 Jul 1997 23:13:11 -0400 (EDT)

From: JFKluender@aol.com

To: qrp-1@Lehigh.EDU

Subject: [23563] Survey results

Message-ID: <970722231111\_-1777592985@emout08.mail.aol.com>

Hey y'all,

Here are the results of my request for advice on how to spend my \$200 insurance money for electronic kits...

OHR 400	4 votes
S&S TAC 1	1 vote
S&S ARX-XX	1 vote
Wilderness Sierra	2 votes
Norcal 40-A	1 vote
Emtech NW40	1 vote

Based on these results, I have ordered the OHR400 kit. By the way, I was incorrect in saying that the kit was on sale for \$200. It is on sale for \$250. I will be supplementing the \$200 insurance money with \$50 of my own

money. Gee, a 4-band QRP rig for 50 bucks! What a deal!

-----  
Date: Tue, 22 Jul 1997 23:15:49 EDT  
From: ka7you@juno.com  
To: wb3aal@talon.net  
Cc: qrp-l@Lehigh.EDU  
Subject: [23564] Re: UPS Batteries  
Message-ID: <19970722.192435.9711.3.KA7YOU@juno.com>

Ron,

My "find" was 750 watt UPS. But when I opened it up, I found 48, yes forty-eight, 2V 5AH sealed lead acid batteries! The system ran on 72 volts. They were spot welded together into six 12 volt packs, and every one of the packs had at least two dead cells, or corroded (completely eaten away) connectors. I could buy a new unit for the price of the batteries alone. Now just how long would it run on 6 car batteries.....?

Rod Johnson KA7YOU from CN97AK near Issaquah, Wa. 160M thru 1296 MHz (3456MHz still in the wings)

NWQRP#120 ARCI#7251 QRP-L#844 NorCal #2007

On Tue, 22 Jul 1997 18:31:41 -0400 "Ron Polityka" <wb3aal@talon.net> writes:

>This is a multi-part message in MIME format.

>

>-----=\_NextPart\_000\_01BC96CD.7FCDFF40

>Content-Type: text/plain; charset=ISO-8859-1

>Content-Transfer-Encoding: 7bit

>

> To all that have UPS systems at home or in the office take note.

>

>Today my plant's front office was chucking out a old UPS unit. I

>asked them why and they said that it does not hold a charge. Well

>since I work in maintenance I asked if I could gut it and use the

>parts in it. They said yes. Well I got a couple of good micro

>switches

>and two gell cell batteries, 12 volt 15 Ah. I asked if I could take

>the

>batteries home since we had no need for them. They said yes. Well

>after charging them up and checking it out, I now have two new

>batteries.

>

[illegible]





Ah gel-cells from a mainframe UPS that weigh 75 lbs each and used one of them to power my ICOM IC-728 during Field Day at 5-watts output. The rig ran for the entire 24-hour period and the voltage dropped from 12.75 to 12.52 volts when all was said and done. The back up battery never came out of the car. I didn't need it. And, besides that, I didn't want to carry it very far. Yes, UPSs are excellent sources of batteries.

> To all that have UPS systems at home or in the office take note.

=====

Bill Jones - KD7S <><  
Sanger, California  
Reply to kd7s@psnw.com

=====

-----

Date: Tue, 22 Jul 1997 21:04:15 -0700  
From: "Dennis B. Dolle" <dolledb@cet.com>  
To: <qrp-l@Lehigh.EDU>  
Subject: [23567] Spokane Area QRPers  
Message-ID: <199707230404.VAA16677@cet.cet.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=ISO-8859-1  
Content-Transfer-Encoding: 7bit

Fellow Masochists,

A few months ago, I began creating a list of QRP operators in the Spokane, WA area with the purpose of forming an informal local group interested in swapping lies and furthering the radio art. Unfortunately, a computer glitch (I won't say how this happened, but it involved a 20 year old son not gifted in the art of computer) caused me to lose the list containing the names and e-mail addresses of the 7 or 8 Spokane amateurs interested in the endeavor. That explains why you have not heard from me. I would like to rebuild this list and proceed, so if you would be so kind to drop me a note, I'll go from there.

Of possible interest, Randy Folz is organizing a QRP seminar for the Spokane hamfest. Randy tells me that the seminar is scheduled for 1:30 or 2:00 PM PST on Aug 3. We think it would be really great to have some local QRP aficionados in the audience to add to the discussion. I would guess that Randy might be able to use some help, as well. Please drop me a note if you have questions, plan to attend the QRP seminar, or would like to help by providing topics for discussion, bringing your favorite QRP rig (finished or unfinished) to the hamfest, etc. I'll pass the info to Randy.

Looking forward to meeting many of you at the Spokane hamfest.

73,

Dennis, NX5W

-----  
Date: Wed, 23 Jul 1997 00:12:41 -0400 (EDT)  
From: ARDUJENSKI@aol.com  
To: henmel@worldnet.att.net, owner-qrp-l@Lehigh.EDU, qrp-l@Lehigh.EDU  
Subject: [23568] Re: ZM-1  
Message-ID: <970723001240\_-1207539613@emout11.mail.aol.com>

Norm,

I have the Z-MATCH and it does a great job. The only problem I ran into was I didn't have a punch for the holes for the coax connectors and I tore up the box trying to drill it (beginners mistake).

In my opinion both the Z-MATCH and his rigs (I have 40M unit) are well designed. The XCVR is real simple to allign also. Roy Gregson has been a big help with any questions I had. One word about the XCVR, it has the ability to really pull in the sigs and the filter and bandpass does great when everything seems to be piling up. I just hit 40 states on the novice band (40M only) since the last week in April using this equipment. As for me, I swear by them....

73's Alan KB7MBI.....

-----  
Date: Wed, 23 Jul 1997 00:21:13 -0400 (EDT)  
From: Chris Cartwright <ccart@dns.vidtel.com>  
To: QRP Reflector <qrp-l@Lehigh.EDU>  
Subject: [23569] Re: UPS Batteries  
Message-ID: <Pine.LNX.3.93.970723001240.1869D-1000000@dns.vidtel.com>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

Gang,

B.G.Micro has 12V 7aH lead acids from "Best" UPS's, just got two with date codes that make them less than a year old :) Oh, yeah \$7! And their \$0.99 2N3553 "housemarked" transistors are RCA4013's. OHR owners take a look. Usual disclaimer...

OBQRP: Right now it's just an idea (bored at a training class today) but I'm thinking of a box the size of and SST that is; paddles, batteries,

tuner, SWR bridge, and maybe keyer, all in one box? Any Spartan  
Sprinter's interested? 72

```
-- Chris Cartwright,   Technical Engineer   |       ccart@vidtel.com       --  
-- N3XRV               QRP WAS 17/9 (w/c)   |       ccart@erols.com       --  
-- QRP-L #655 NORCAL #1891 QRP-ARCI #????? | http://dns.vidtel.com/~ccart --  
-- WIMPS Q's=04 30M=04 17M=00 12M=00 STATES=03/00/00 DX=00/00/00 QSL's=00 --
```

-----  
Date: Wed, 23 Jul 1997 00:41:53 EDT  
From: n4so@juno.com (charles k brown)  
To: QRP-L@Lehigh.EDU  
Subject: [23570] Resonant Speakers  
Message-ID: <19970722.114130.4383.20.n4so@juno.com>

QST magazine - Jan 1989 page 37  
"More on Resonant Speakers"

I own a SKYTEC , cw resonant speaker from the year  
1980.

Ken Brown, N4SO  
QTH nr Mobile, AL/ EM50tk  
qrp-l #622  
n4so@juno.com

-----  
Date: Tue, 22 Jul 1997 22:08:36 -0700  
From: Ken Lopez <kjlopez@earthlink.net>  
To: henmel@worldnet.att.net  
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>  
Subject: [23571] Re: ZM-1  
Message-ID: <33D591D7.6AA6@earthlink.net>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Norm,

I have one which I built recently. I actually built it at a cabin in  
the woods, using a Makita battery drill and a butane soldering iron.  
Kitbuilding in the field! Worked right off with the W3EDP antenna  
(85'wire with 17' counterpoise) on all bands. Good signal reports with

5 watts, even on SSB on 75 meters. I would loan it to you, but I'm taking it to Flagstaff. Maybe after? Aw heck, just order one. You'll love it.

Cheers,  
Ken

PS: One tip; shim the tuning capacitors under the panel to take up some of the mounting screw length. Call me and I'll explain.

-----  
Date: Wed, 23 Jul 1997 05:04:57 -0700  
From: Harvey Hetland <n6mm@earthlink.net>  
To: QRP-LIST <QRP-L@Lehigh.EDU>  
Subject: [23572] RE: KH6AFS/QRP info  
Message-ID: <33D5F369.1576@earthlink.net>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Sam, KH6AFS/QRP, is on 7040 now, 0509Z, 23 JUL. You might have to call a CQ to bring him out of the woodwork. He has a big signal here on the west coast with his 4 watts and a rhombic antenna, but he does not transmit much when not in a QSO. During my QSO with him on 40m he indicated that he might try 80m and 10m later and possibly even 160m. I exchanged 599 with him both ways, but I have the benefit of a two element beam on 40m, i.e. "your mileage may vary". Good luck to those that are looking for KH6 with QRP. 0500Z is his approximate local sunset, so the band should at a peak to the US.

73, Harvey, N6MM.

-----  
Date: Tue, 22 Jul 1997 22:22:47 -0700 (MST)  
From: Chris Trask <ctrask@primenet.com>  
To: Bill Meara <wmeara@erols.com>  
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>  
Subject: [23573] Re: Dual Gate MOSFETS  
Message-ID: <Pine.BSI.3.96.970722221901.14809C-1000000@usr03.primenet.com>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Tue, 22 Jul 1997, Bill Meara wrote:



Graphics by Loek Frederiks

-----  
Date: Tue, 22 Jul 1997 22:49:02 -0700 (PDT)  
From: Alan Kaul <kaul@netcom.com>  
To: "Wilford D. Lindsey" <70511.3041@CompuServe.COM>  
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>  
Subject: [23574] Re:DX on 20 on 7/23/97  
Message-ID: <Pine.3.89.9707222200.A2315-01000000@netcom4>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

I am pleased to report my inaugural QSO with my 20M SST was with DOC in Rochester, MN. 2 x QRP -- he at 5 watts and me running about 2 and 1/2 watts to a 'optimized' SST (based on the design changes of Dave, W6EMD-----look for his mods in an upcoming issue of QRPP). Not often can you have a QSO with another QRP op ---- and even when you do the odds that he'll be on the list are plenty slim. But it happened tonight.

Thanks DOC, Thanks, Dave, thanks Wayne (N6KR) and thanks Bob at Wilderness Radio.

73/72 de alan

[<Alan Kaul, W6RCL>] kaul@netcom.com

-----  
Date: Tue, 22 Jul 1997 23:24:31 -0700 (PDT)  
From: Alan Kaul <kaul@netcom.com>  
To: qrp-1@Lehigh.EDU  
Subject: [23575] Re:DX on 20 on 7/23/97 (fwd)  
Message-ID: <Pine.3.89.9707222308.A2315-01000000@netcom4>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

Oooops, forgot to mention Doc's call -- he's K0EVZ, one of the gang here on the list!! Sorry Doc,

[<Alan Kaul, W6RCL>] kaul@netcom.com

----- Forwarded message -----

Date: Tue, 22 Jul 1997 22:49:02 -0700 (PDT)  
From: Alan Kaul <kaul@netcom.com>  
To: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>  
Subject: Re:DX on 20 on 7/23/97

I am pleased to report my inaugural QSO with my 20M SST was with DOC in Rochester, MN. 2 x QRP -- he at 5 watts and me running about 2 and 1/2 watts to a ''optimized'' SST (based on the design changes of Dave, W6EMD-----look for his mods in an upcoming issue of QRPP). Not often can you have a QSO with another QRP op ---- and even when you do the odds that he'll be on the list are plenty slim. But it happened tonight.

Thanks DOC, Thanks, Dave, thanks Wayne (N6KR) and thanks Bob at Wilderness Radio.

73/72 de alan

[<Alan Kaul, W6RCL>] kaul@netcom.com

-----  
Date: Wed, 23 Jul 1997 06:20:40 +0100  
From: Leon Heller <leon@lfheller.demon.co.uk>  
To: hynde@flash.net  
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>  
Subject: [23576] Re: Cap/coil combo's  
Message-ID: <Fs+l9SAoSZ1zEwPS@lfheller.demon.co.uk>  
MIME-Version: 1.0

In message <33ADEE77.7B88@flash.net>, ka8ddz <hynde@flash.net> writes  
>Wishing now I would have finished Electrical Engineering...Im preparing  
>to embark on my first 100% scratch endeavor, bits and pieces from  
>different schematics I've seen. And a couple questions came to mind.  
>  
>While making something like a tuned input for a front end, is there a  
>ratio of capacitance vs inductance that should be followed? For example  
>a coil with 10 turns and a capacitor or say 30 turns and a different  
>capacitor. What effect does this have?



A rule of thumb I remember from many years ago is to use a capacitor with about the same value in pF as the wavelength in metres. I haven't actually done the calculations but it looks about right.

73, Leon

--

Leon Heller: [leon@lfheller.demon.co.uk](mailto:leon@lfheller.demon.co.uk) <http://www.lfheller.demon.co.uk>

Tel: +44 (0) 118 947 1424

See <http://www.lfheller.demon.co.uk/rcm.htm> for details of a low-cost reconfigurable computing module using the XC6216 FPGA

-----  
Date: Wed, 23 Jul 1997 06:15:49 +0100  
From: Leon Heller <[leon@lfheller.demon.co.uk](mailto:leon@lfheller.demon.co.uk)>  
To: [wmeara@erols.com](mailto:wmeara@erols.com)  
Cc: Low Power Amateur Radio Discussion <[qrp-1@Lehigh.EDU](mailto:qrp-1@Lehigh.EDU)>  
Subject: [23577] Re: Dual Gate MOSFETS  
Message-ID: <[e8FjJMAFOZ1zEwMp@lfheller.demon.co.uk](mailto:e8FjJMAFOZ1zEwMp@lfheller.demon.co.uk)>  
MIME-Version: 1.0

In message <199707230134.VAA15567@smtp3.erols.com>, Bill Meara <[wmeara@erols.com](mailto:wmeara@erols.com)> writes

>Fellow QRPers:

>

>Our literature is filled with receivers built around dual gate MOSFETS like  
>the 40673 and the 3N211. I recently built a 20 meter superhet that used  
>these components in mixer and product detector circuits. During my 'parts  
>gathering phase' I was surprised by how difficult it was to find these  
>parts. I understand that they may be out of production.

>

>Is anyone making dual gate MOSFETS anymore? If not, what are the  
>implications for homebrewers who like to use discrete components? How many  
>of these wonderful devices were built? Is there a stock of them out there?  
>Might we find ourselves in a situation where its easier to find a 12AX7 tube  
>than it is to find a dual gate MOSFET?

Dual-gate MOSFETs like the BF960/961/981 are easy to get hold of here in the UK. Cirkit ([mailorder@cirkit.co.uk](mailto:mailorder@cirkit.co.uk)) has them in their catalogue.

73, Leon

--

Leon Heller: [leon@lfheller.demon.co.uk](mailto:leon@lfheller.demon.co.uk) <http://www.lfheller.demon.co.uk>

Tel: +44 (0) 118 947 1424

See <http://www.lfheller.demon.co.uk/rcm.htm> for details of a low-cost reconfigurable computing module using the XC6216 FPGA

-----  
Date: Wed, 23 Jul 1997 03:36:43 -0400 (EDT)  
From: G4YND@aol.com  
To: qrp-l@Lehigh.EDU  
Subject: [23578] Argo 509. The First Question.  
Message-ID: <970723033642\_128509776@emout11.mail.aol.com>

Hi All.

I've just got this lovely Argonaut 509. Feels like a real radio, preselector tuning, and all that good stuff.  
So the soldering iron is hot, and the first task is to this:-

On cw, when the key closes, there is a stong click on the audio. "Not nice", on the loud speaker, bad when wearing phones!

Any of you wise guys out there have the answer?

Best wishes to all,  
David, G4YND.

-----  
Date: Wed, 23 Jul 1997 10:45:08 +0300  
From: Arjen Raateland <Arjen.Raateland@vyh.fi>  
To: Dan\_Tayloe-P26412@email.mot.com  
Cc: QRP-L <QRP-L@Lehigh.EDU>  
Subject: [23579] Re: re : 2N7000 Help (or Murphy brought badgers  
Message-ID: <33D5B684.62FD@vyh.fi>  
MIME-version: 1.0  
Content-type: text/plain; charset=us-ascii  
Content-transfer-encoding: 7bit

Dan Tayloe-P26412 wrote:

>  
>  
> >Ooops, snapped a leg off squeezing it in :( I only have J305's  
> >and 2N5555 in the parts bin, can I sub one of these? Is there  
> >a non-FET work around, even if it does cost me some milliamps  
> >until I restock on the 7000's?  
>  
>

> Chris:  
>  
> A J305 or 2N5555 does not have the low "on" resistance that the 2N7000  
> has. However, I believe that Radio Shack now carries these. At least  
> I \*think\* I saw them the last time I was in. Alternatively, you might  
> try an (overkill) IRF510 or IRF511. RS carries these for sure.  
>  
> A final alternative is to use a PNP pass transistor for the keying  
> circuit. The Serria uses (or used to use) something like a generic  
> 2n3905 or 2N4402 or 2N4403. Look in the ARRL handbook (1996 or 97)  
> for the schematic.  
>  
> - Dan Tayloe, N7VE, Phoenix, AZ, QRPL #696, Az ScQRPions  
>

Dan, Chris & others,

A junction depletion type FET like the J305 has completely different curves of  $V_{gs}$  against  $I_d$  than an enhancement type MosFet of the 2N7000 kind. They won't mix very well.

The depletion FET needs a negative gate voltage to be biased off and the enhancement type needs a positive gate voltage to be ON.

Be careful: The bipolar junction alternative (2N3905 etc.) will need base current to be saturated and I don't know if the keyer chip can deliver that. The circuit will be laid out for the 2N7000 and may not have a (base current) limiting resistor. How much base current is needed depends on the collector current demand (keying current), which will be different for every rig. One mA base current would be a start. The 2N7000 is still the best all-round solution, I suppose. The IRF-types should work, too, of course.

73, OH2ZAZ

--

Arjen Raateland  
Finnish Environment Institute  
SAS Support  
phone +358 9 4030 0457

-----

Date: Wed, 23 Jul 1997 10:13:38 -0300  
From: Dave Marling <dbm@klis.com>  
To: qrp-l@Lehigh.EDU  
Subject: [23580] UPS Batteries  
Message-ID: <2.2.32.19970723131338.00708568@klis.com>

Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Good morning to all,

WB3AAL wrote:

> To all that have UPS systems at home or in the office take note.  
>  
> Today my plant's front office was chucking out a old UPS unit. I  
> asked them why and they said that it does not hold a charge. Well  
> since I work in maintenance I asked if I could gut it and use the  
> parts in it. They said yes. Well I got a couple of good micro switches  
> and two gell cell batteries, 12 volt 15 Ah. I asked if I could take the  
> batteries home since we had no need for them. They said yes. Well  
> after charging them up and checking it out, I now have two new batteries.  
>  
> The only problem with the ups unit was the solid state circuit board  
> was fried! So if you see someone junking a ups ask them if you  
> can have it. Check out the batteries!

I have found that in a good many cases it is the batteries that have failed (just from the time in service). And for the price of a replacement set of batteries you can have a UPS for your computer stuff. Although like a lot of things it is probably cheaper to buy the entire unit than a part.

Don't overlook burglar alarm companies as a source of gel cells. The commonly used ones are 12V 4AH and 12V 6(or 7)AH.

Fire alarm companies are also a source but their prices tend to be higher (at least in my part of the world) for the same battery. When these are used in fire alarm panels, two are connected in series to give 24VDC. Often times one of the pair will fail and common practice is to replace both. Both are then tossed out. If you make contact with one of these outfits then you might be able to obtain the still-good unit for nothing or next to it.

Battery life in burglar alarm panels is somewhere in the range of 5-7 years and in fire alarm service 4-6 years.

Dave  
VE1VQ  
dbm@klis.com

Understand the problem before you attempt the solution.

-----  
Date: Wed, 23 Jul 1997 10:42:30 -0300  
From: Dave Marling <dbm@klis.com>  
To: qrp-1@Lehigh.EDU  
Subject: [23581] Re: ZM-1  
Message-ID: <2.2.32.19970723134230.0071b52c@klis.com>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

KB7MBI wrote:

>didn't have a punch for the holes for the coax connectors and I tore up the  
>box trying to drill it (beginners mistake).

>

For those of you trying to drill large holes in aluminum, you might try the following.

As an example, if you want to drill a 3/8 inch hole for a bnc connector, first clamp the metal to the drill press table (with a piece of plywood or some other flat piece of wood as support underneath) and then drill a pilot hole of 1/8 inch.

Tear a strip of cotton cleaning rag about an inch wide by two inches long and fold over once so you now have a square of 1 x 1 inch double thick. Squirt some household lubricating oil on the cloth. Set the drill press for one of the slower speeds. Place the cloth over the pilot hole and slowly feed the 3/8 bit down on to the cloth and thru the hole.

This should give you a nice smooth hole. The cloth stops the bit from chattering or from digging in and pulling into and ripping the aluminum.

I would suggest that you experiment on a piece of scrap metal first to get the feel of how fast to feed the bit. Slow and steady.

Dave  
VE1VQ  
dbm@klis.com

Understand the problem before you attempt the solution.

-----  
Date: Wed, 23 Jul 1997 04:46:33 -0400 (EDT)  
From: Chris Cartwright <ccart@dns.vidtel.com>  
To: QRP Reflector <qrp-1@Lehigh.EDU>

Subject: [23582] KH7 on 7.119  
Message-ID: <Pine.LNX.3.93.970723043925.351A-1000000@dns.vidtel.com>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

N/T+ listen up, heard KH7EX on 7.119 at 0815Z 23JUL97. Got a QRZ? out of him with 2W to a dipole laying on my roof from here in MD. I think I would have got him if I had "real" antenna. Unless something changed recently, I don't think sunspots have anything to do with it :) 72

-- Chris Cartwright, Technical Engineer | ccart@vidtel.com --  
-- N3XRV QRP WAS 17/9 (w/c) | ccart@erols.com --  
-- QRP-L #655 NORCAL #1891 QRP-ARCI #???? | http://dns.vidtel.com/~ccart --  
-- WIMPS Q's=04 30M=04 17M=00 12M=00 STATES=03/00/00 DX=00/00/00 QSL's=00 --

-----  
Date: Wed, 23 Jul 1997 07:11 CDT  
From: FAITHD@dnr.state.wi.us (Don C. Faith III, AM/7, \((608\)) 267-3135)  
To: henmel@worldnet.att.net  
Cc: qrp-l@Lehigh.EDU  
Subject: [23583] Re: ZM-1  
Message-ID: <009B7AC0124BA2CE.3886@dnr.state.wi.us>

The Z-match (ZM-1) kit assembled by Roy Gregson of EMTech is a nice little tuner. I haven't used it much as yet but it does seem to tune a variety of antennas. The case does require drilling a number of holes including a couple that are big enough for PL-259's (the threaded type).

If you want to learn more about Z-match tuners in general, refer to:

<http://www.pconline.com/~rohrwerk/k0jd/z-match.html>

The kit Roy provides has all of the components, connectors, wire, case, etc. The tuner should be able to handle most antennas (80m - 10m) and can probably handle up to 20W if the initial tuning is done at 5W (Power limitation is the small 270 pf poly film capacitors).

I am in the process of final assembly of Roy's NW40 right now but got the tuner last winter. Note, if you have any problems, Roy's help is only an e-mail msg away.

Hope this helps, 73 de N9WR, Don C. Faith III

-----

Date: Wed, 23 Jul 97 03:35:35 UT  
From: "GREG " <KB2QQM@msn.com>  
To: "QRP-L (SENDING ? TO QRP-L)" <qrp-l@Lehigh.EDU>  
Subject: [23584] CODE-BOY KEYERS  
Message-ID: <UPMAIL05.199707230336380398@msn.com>

Anybody out there try the "Code-Boy" keyer by Radio Adventures Company. Great selection of keyers and merchandise in kit and built form. I built the Code-boy keyer into my Yaesu FT-840 and its performs fantastic.

you can reach Lee at [www.radioadv.com](http://www.radioadv.com)  
or 814-437-5355 ph  
or 814-437-5432 fax  
email [rac@usa.net](mailto:rac@usa.net)

hope you discover the great kits i have found and built.  
still working on my 38 special, a winter kit turned into a summer kit still on the workbench.oh well ! "72" Greg  
KB2QQM@EMAIL.MSN.COM  
or  
KB2QQM@MSN.COM

-----  
Date: Wed, 23 Jul 1997 10:48:15 -0400  
From: Zack Lau <zlau@arrl.org>  
To: qrp-l@Lehigh.EDU  
Subject: [23585] Re: Dual Gate MOSFETS  
Message-ID: <33D619AF.1A01@arrl.org>  
Mime-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

GaAsFETs and MOSFETs for typical receive applications are typically biased around 10 mA, though I've been known to use medium power (\$50) GaAsFETs biased at 100 mA for high dynamic range preamps. MOSFETs often eat up more power since they typically run off 12 volts, while most small signal GaAsFETs have 5 volt power supplies. Some low noise microwave devices have rather low voltage ratings.

I wouldn't try using GaAsFETs at HF, due to a phenomena known as the 1/f noise corner. Below a certain frequency, FETs get very noisy. Thus, one rarely sees PHEMTs used below 900 MHz and GaAsFETs used below 100 MHz, despite what the extrapolated noise curves might indicate for performance. Also, these high frequency devices will oscillate at many GHz, resulting in seemingly flakey or poor

performance if not used properly.

--Zack Lau W1VT

-----  
Date: Wed, 23 Jul 1997 11:03:04 -0400  
From: "James R. Johns" <jrjohns@mitre.org>  
To: qrp-l@Lehigh.EDU  
Subject: [23586] VLF Receiver - Comparator  
Message-ID: <3.0.1.32.19970723110304.02524c3c@mail91.mitre.org>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

I'm looking to update my workbench and add a WWVB receiver-comparator as a bench frequency reference. I'm familiar with the 73 Magazine project from a few years ago, but I'd like to see about buying a piece of pre-owned commercial test equipment for this purpose. What I'm looking for is a list of model numbers from Fluke, HP, or whatever that would fit this requirement (VLF Receiver/comparator with a 10 MHz or similar output locked to WWVB). Since this gear isn't produced by Fluke or HP any longer, I'm hoping that someone remembers what was available in past years. My collection of old test equipment catalogs doesn't go back far enough to find a reference to VLF comparators. I'm looking forward to the upgrade of WWVB going on-line this fall which should greatly improve the usability of this reference source.

I think that HP made a model 117A VLF comparator but I'm not sure if it went down to 60KHz or not. Any suggestions or recommendations would be appreciated. Thanks 73/72

Note: GPS based references are new enough that I doubt they have dropped into an acceptable price range. (sub \$1000) Anyone know of a cheap GPS frequency reference with 10 MHz output?

Jim Johns KA0IQT  
jrjohns@mitre.org

-----  
Date: Wed, 23 Jul 1997 11:28:25 -0400  
From: Joseph Trombino jr <joebarb@wilmington.net>  
To: QRP-L@Lehigh.EDU  
Subject: [23587] email address for KD1JV



Message-ID: <3.0.1.32.19970723112825.00a98b30@wilmington.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Hello Fellow list members. I recently tried to send email to Steve Weber KD1JV regarding payment for his upcoming spectrum analyzer kit and have been unsuccessful using the following :

kd1jv@ncia.net

kd1jv@moose.ncia.net

I got the latter address from a note posted by Steve to this list a day or so ago and thought it was a good address. Does anyone out there have a current address for kd1jv??? Steve, are you copying?? I need your postal address to remit payment -- please email me direct at:

joebarb@wilmington.net

Many thanks to all on the list and cheers from Joe W2KJ

-----  
Date: Wed, 23 Jul 1997 08:50:47 -0700  
From: Robert Everitt Heiss <rheiss@volta.ee.calpoly.edu>  
To: qrp-l@Lehigh.EDU  
Subject: [23588] Re: Argo 509. The First Question.  
Message-ID: <199707231550.IAA08502@volta.ee.calpoly.edu>

> On cw, when the key closes, there is a stong click on the audio. "Not  
> nice", on the loud speaker, bad when wearing phones!  
>  
>  
> Best wishes to all,  
> David, G4YND.

I didn't notice a click on transmit with mine. Like many '509 owners I have an audio filter wired in line at the accessory jack. If yours has no audio filter, that could explain the click. The original filter was Ten-Tec model 208 for the external version in a matching cabinet.

If you cannot find a genuine 208 and don't wish to purchase an MFJ clone, it's easy to duplicate at home. The exact same circuit for a 750 Hertz CW filter has been published many times in the QRP literature, for instance in W1FB's QRP Notebook, 2nd edition, page 68 with a board pattern ready to go

on page 69. This was once available from 624 Kits; I don't know which of the current kit vendors offer it.

The little TR relay also makes a mechanical click when the key closes. I started with a noisier HW-8 so the Argonaut relay does not bother me. Now PIN diodes are available so with some clever redesign, an electronic relay might be fitted.

73, Robert Heiss K06KA  
rheiss@volta.ee.calpoly.edu

-----  
Date: Wed, 23 Jul 1997 11:53:18 -0400 (EDT)  
From: K5BDZ@aol.com  
To: wb3aal@talon.net, qrp-l@Lehigh.EDU  
Subject: [23589] Re: Gelled Cell Batteries / Chargers  
Message-ID: <970723115058\_128561285@emout18.mail.aol.com>

Another good source of used Gelled Cell batteries might be your local security alarm companies. Also a good source of 12 and 6 volt charger boards, most working OK.

NOTE: Do not waste THEIR time by picking through their junked battery throw-away box. Just take a dozen or so batteries - if they will let you- and begonne! You can check them out when you get home. Experience dictates a 30% good fortune and 70% bad battery expectation.

REMEMBER to dispose of those bad batteries properly!

AND DON'T FORGET TO SAY THANK YOU!!!!!!

Bill, K5BDZ

-----  
Date: Wed, 23 Jul 1997 12:10:38 -0400 (EDT)  
From: K5BDZ@aol.com  
To: wmeara@erols.com, qrp-l@Lehigh.EDU  
Subject: [23590] Re: Dual Gate MOSFETS  
Message-ID: <970723120836\_-1375728110@emout02.mail.aol.com>

Dan's Small Parts still has a reasonable supply of Dual Gate MOSFETS. If he is out, I have a supply (which I am keeping for my homebrew for years to come) but I could part with a few. Just to keep things simple and non-competitive, I will charge the same price as Danny. I only make this

offer to help those in need. I'm not in the business!  
Bill, K5BDZ

-----  
Date: Wed, 23 Jul 1997 04:14:21 +0800  
From: "W. Daniel, 9V1ZV" <daniel@pandora.lugs.org.sg>  
To: qrp@pandora.lugs.org.sg  
Subject: [23591] Digital PSU  
Message-ID: <33d5149e.pandora@pandora.lugs.org.sg>

Hi,

I am trying to figure out how to build a multi-chemistry smart charger/analyser. As part of this charger project, I am trying to build a microcontroller controlled voltage source. Does anyone have any ideas how this might be done? I would especially appreciate it if you idea could use a switching mode power supply as I would like to avoid too much heat dissipation in the pass transistor. Thanks.

73 de 9V1ZV Daniel

--  
+-----+-----+  
Daniel Wee	daniel@pandora.lugs.org.sg
9V1ZV	danwee@singnet.com.sg
QRP-L #667	9V1ZV@amsat.org
+-----+-----+

-----  
Date: Wed, 23 Jul 1997 09:29:05 -0700  
From: gsurrency@juno.com (Gary L L Surrency)  
To: qrp-l@Lehigh.EDU  
Subject: [23592] Making holes in aluminum; floating 3.5mm phone jacks  
Message-ID: <19970723.092906.3590.0.gsurrency@juno.com>

I like to use a tapered reamer to make smooth holes in thin aluminum. It is nearly impossible to get a clean round hole otherwise, even with a sharp drill and a drill press. You do have to be careful once you get near the size you are looking for, so drill a slightly undersize hole and then carefully ream it to size while checking frequently so you don't make it too big.

However you do it, always start with a 1/16" drill after you center punch it so the drill doesn't "walk". Then work your way up to the desired size with larger drills until you get close to the desired hole. Apply the

reamer so you don't have to remove so much metal by reaming. I use an automatic center punch set for light pressure until satisfied the location is correct, then center punch several more times or increase the spring tension for a heavy "punch". Make a nice indentation, but use a back piece of hard wood behind the metal or you'll get distortion around the punch location.

There will probably be a little ridge around the edge of the hole afterward that can be removed with a deburring tool or gentle use of a much larger drill bit lightly twirled on both sides of the hole. When the inside of the hole isn't accessible with a long drill bit, careful use of a knife or chisel will peel the ridge off. Keep the flat side of the punch against the metal so you don't gouge.

The Unibit (tm) stepped drill works well too, but nothing will give as perfect a round hole as the reamer does.

When finished with all the holes, I use ScotchBrite (tm) and a little soap and water to get the fine scratches out of the surface and to prepare it for painting. The result is a nice sheen to the aluminum that looks good even if you don't paint it. And the ScotchBrite further smoothes the sharp edges around the holes that may still remain after the deburring process, and removes any pencil marks from the measurements you made.

-----  
On another topic:

I was looking for a way to "float " the sleeve contact of the headphone jack on my newly boxed 38S, and came up with the following method:

Using one of the square, black plastic 3-conductor jacks from R/S, I noticed there was a shoulder on the jack's plastic body where the threaded part protrudes. I reamed the panel hole to this size, and then looked for a fiber washer to insulate the knurled nut on the outside. Lacking one that would fit, I found some old banana jacks that had fiber washers. I carefully drilled and reamed the small holes to clear the phone jack's threads. Then I used a file to smooth both sides of the fiber washer. A small metal washer and the the knurled nut secured the jack to the back panel of the 38S box and insulates the sleeve. Finally, connections to the tip and ring complete the installation so the L & R channels are in series.

So if you lack the fiber washer for this, check your old supply of banana jacks for a suitable candidate. ;-)

AB7MY

Gary Surrency  
Chandler, AZ (Near Phoenix), QRP-L #571, AZ ScQRPions

-----  
Date: Wed, 23 Jul 1997 12:36:55 -0400 (EDT)  
From: Martin Squicciarini <skitch@resuba.com>  
To: qrp <qrp-1@Lehigh.EDU>  
Subject: [23593] San Diego Next week  
Message-ID: <Pine.LNX.3.91.970723123432.11087A-100000@resuba.com>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

I will be in San Diego next for the SPIE conference. Will anyone else be there? If there are any local QRPer that would like to get together while I'm out there let me know and we can set up a time and place.

72/73  
Marty Squicciarini NR3Z  
skitch@resuba.com (home)

-----  
Date: 23 Jul 1997 11:01:15 GMT  
From: mark.milburn@commonlink.com (Mark Milburn)  
To: jrjohns@mitre.org, mark.milburn@juno.com  
Cc: qrp-1@Lehigh.EDU  
Subject: [23594] Re: VLF Receiver - Comparator  
Message-ID: <3298426813.25683981@commonlink.com>

this was using the "reply" setting. Evidently no quoting device is available.

73 Mark

-----  
Date: Wed, 23 Jul 1997 10:50:40 -0700  
From: Ed Loranger <we6w@qsl.net>  
To: n6mm@earthlink.net  
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>  
Subject: [23595] Re: KH6AFS/QRP 40m  
Message-ID: <33D6446F.589D@qsl.net>

Mime-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Hi Harvey, QRP-L gang! Boy you had a BIG, HUGE signal last night.  
Do you live next door to me????

I heard Sam open the door at 10 til the hour. Figured he had jumped the gun. I enjoyed listening to you guys and had no intention of working the Sked with W7LS, figured I would be rude, even at QRP to call him on the sked freq, 7040.

Then, Horrors, Jim called me, but at least he was up a KC. 7041. I dropped my power to .5 watts and moved up the band hoping to QRT the sked. Well, you guys signed off real quick at about 0510Z so We worked a bit and qsy'd down to exactly 7040 on my xtal marker.

After hearing no traffic there, we worked our sked. I went QRO up to 3 watts. First We established I could hear him with the pixie2, W7LS at 100 Watts.

Then he listened carefully as I worked the pixie2.

HE GOT ME!!!! We had a short qso, pixie2 to his QRO Rig. (He quickly asked: PSE Go Back to OHR-100), but not until sharing exhilarating remarks:  
"I hear you. Weak, but what can you expect from a little 2N2222 transistor."

I was in shock and now I've got a DX pixie2 QSO.

.25 Watts at 673 miles=2692 miles per watt.

We didn't try pixie to pixie cuz he's configured for 80 meters still. But we did it!!!

This has taken 3 or 4 weeks of work. And different antennas. Currently I've got a dipole cut for 7.04 MHz, 300 ohm twinlead at about 58 feet, maybe 60 feet transmission line, to my balanced feeder input of the QRP antenna tuner.

Note: I tuned up the antenna with the SWR bridge/Tuner, then bypassed the QRP Powermeter/SWR Bridge when using the pixie2. Didn't want to waste any power.

Then QRP meter give me about 160 mw out, and I know it needs something to run on.

Anyway, that's the latest on what you can do with QRP. Never would have improved my antenna/transmission line if I always worked QRO or 5 Watt QRP.

QRP is Cool!  
-Ed Loranger

--

72/73 de we6w qrp es cw ONLY (673 miles on 0.25 Watts!)  
HW-8;OHR-100, Pixie2, Johnson Viking II w/VFO.  
QRP-L#1068/Norcal#2227/ARS#275/ARCI#9397 grid CM88ok  
mailto:we6w@qsl.net <http://www.qsl.net/we6w>

-----  
Date: Wed, 23 Jul 1997 11:02:15 -0700 (MST)  
From: Chris Trask <ctrask@primenet.com>  
To: "James R. Johns" <jrjohns@mitre.org>  
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>  
Subject: [23596] Re: VLF Receiver - Comparator  
Message-ID: <Pine.BSI.3.96.970723105523.8242A-1000000@usr05.primenet.com>  
MIME-Version: 1.0  
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Wed, 23 Jul 1997, James R. Johns wrote:

> I'm looking to update my workbench and add a WWVB receiver-comparator as a  
> bench frequency reference. I'm familiar with the 73 Magazine project from  
> a few years ago, but I'd like to see about buying a piece of pre-owned  
> commercial test equipment for this purpose. What I'm looking for is a list  
> of model numbers from Fluke, HP, or whatever that would fit this  
> requirement (VLF Receiver/comparator with a 10 MHz or similar output locked  
> to WWVB). Since this gear isn't produced by Fluke or HP any longer, I'm  
> hoping that someone remembers what was available in past years. My  
> collection of old test equipment catalogs doesn't go back far enough to  
> find a reference to VLF comparators. I'm looking forward to the upgrade of  
> WWVB going on-line this fall which should greatly improve the usability of  
> this reference source.

>

The HP117A appears in the 1965 catalogue. It went out of production shortly thereafter.

> I think that HP made a model 117A VLF comparator but I'm not sure if it  
> went down to 60KHz or not. Any suggestions or recommendations would be  
> appreciated.

The HP117A works at 60kHz only as it was designed as a WWVB receiver. I just bought one at an estate sale, with the antenna and manual, for \$100. One thing about this receiver is that it is not recommended that the 100kHz output be used as a reference, as it's pretty noisy. Instead, the receiver is used as a check of how well your lab reference (in my case, an HP101A) is working.

Regards,

```

      ,-----'
    / If you understand it, \
   / then it's obsolete! \
  \ -----'
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    \ \ \ ( ) \ \
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       \| | | | \ '.
        c__ ; c__ ; ' - . ' > .__

```

Chris Trask / N7ZWY  
Principal Engineer  
ATG Design Services  
P.O. Box 25240  
Tempe, Arizona 85285-5240

Email: [ctrask@primenet.com](mailto:ctrask@primenet.com)

Date: Wed, 23 Jul 1997 11:08:24 -0700 (PDT)  
From: Jim W7LS <w7ls@brigadoon.com>  
To: we6w@qsl.net  
Cc: nwq-1@scn.org, qrp-1@Lehigh.EDU  
Subject: [23597] Re: KH6AFS/QRP 40m  
Message-ID: <199707231808.LAA27432@siskiyou.brigadoon.com>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Ed !



Hey, run the numbers one more time. 673 miles divided by 160 mw = 4,206 miles per watt!!

You used a quarter watt for your calculation. I measured my Pixie on 80 and got 168 mW using an oscilloscope and a 50 ohm terminator. So many volts peak to peak, 50 ohms, etc, etc... = 168 mW

So, does this mean you get 4 1,000 miles per watt certificates, stapled in series????

Jim W7LS

At 10:50 AM 7/23/97 -0700, you wrote:

>Hi Harvey, QRP-L gang! Boy you had a BIG, HUGE signal last night.

>Do you live next door to me????

>

>I heard Sam open the door at 10 til the hour. Figured  
>he had jumped the gun. I enjoyed listening to you  
>guys and had no intention of working the Sked with  
>W7LS, figured I would be rude, even at QRP to call him  
>on the sked freq, 7040.

>

>Then, Horrors, Jim called me, but at least he was up a KC.  
>7041. I dropped my power to .5 watts and moved up  
>the band hoping to QRT the sked. Well, you guys signed  
>off real quick at about 0510Z so We worked a bit and  
>qsy'd down to exactly 7040 on my xtal marker.

>

>After hearing no traffic there, we worked our sked. I  
>went QRO up to 3 watts. First We established I could hear  
>him with the pixie2, W7LS at 100 Watts.

>

>Then he listened carefully as I worked the pixie2.

>

>HE GOT ME!!!! We had a short qso, pixie2 to his QRO Rig.  
>(He quickly asked: PSE Go Back to OHR-100), but  
>not until sharing exhilarating remarks:  
>"I hear you. Weak, but what can you expect from  
>a little 2N2222 transistor."

>

>I was in shock and now I've got a DX pixie2 QSO.

>

>.25 Watts at 673 miles=2692 miles per watt.

>

>We didn't try pixie to pixie cuz he's configured for  
>80 meters still. But we did it!!!

>

>This has taken 3 or 4 weeks of work. And different  
>antennas. Currently I've got a dipole cut for  
>7.04 MHz, 300 ohm twinlead at about 58 feet, maybe 60 feet

>transmission line, to my balanced feeder input of the  
>QRP antenna tuner.  
>  
>Note: I tuned up the antenna with the SWR bridge/Tuner,  
>then bypassed the QRP Powermeter/SWR Bridge when using  
>the pixie2. Didn't want to waste any power.  
>  
>Then QRP meter give me about 160 mw out, and I know it  
>needs something to run on.  
>  
>Anyway, that's the latest on what you can do with  
>QRP. Never would have improved my antenna/transmission  
>line if I always worked QRO or 5 Watt QRP.  
>  
>QRP is Cool!  
>-Ed Loranger  
>--  
>72/73 de we6w qrp es cw ONLY (673 miles on 0.25 Watts!)  
>HW-8;OHR-100, Pixie2, Johnson Viking II w/VFO.  
>QRP-L#1068/Norcal#2227/ARS#275/ARCI#9397 grid CM88ok  
>mailto:we6w@qsl.net <http://www.qsl.net/we6w>  
>  
>  
>

-----  
Date: Wed, 23 Jul 1997 12:21:09 -0600  
From: John Evans - N0HJ <[jaevans@codenet.net](mailto:jaevans@codenet.net)>  
To: [qrp-l@Lehigh.EDU](mailto:qrp-l@Lehigh.EDU)  
Subject: [23598] CALLS2DIST via qrp-l listserver  
Message-ID: <33D64B95.3E20@codenet.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Greetings,

Is the great circle distance email service broken or is it me ??  
Is there an alternative service/calculator??

thx es 73/72 de n0hj - john

-----  
John A. Evans  
Office: (719) 528-1800 x164

Chief Systems Administrator  
Titan Software Systems

Fax: (719) 528-1888 1115 Elkton Drive, Suite 200  
email: jaevans@cos.cst.titan.com Colorado Springs, CO 80907-3535

---

Norcal #262 QRP-L #219 QRP-ARCI #8303 NE-QRP #213 CQC #045  
CQrp #15 NJ-QRP #50 AK-QRP #52 NW-QRP #454 FISTS #3184  
Personal Web Page: <http://www.geocities.com/capecanaveral/9773/>

---

-----  
Date: Wed, 23 Jul 1997 11:26:48 -0700  
From: laura halliday <ve7ldh@direct.ca>  
To: qrp-l@Lehigh.EDU  
Subject: [23599] Flash Comm URLs  
Message-ID: <33D64CE8.4615BD25@direct.ca>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Gulp - I mistyped things yesterday. Sorry, folks...

The correct FCC URL is:

<http://www.fcc.gov/Bureaus/Wireless/Orders/1997/da971451.txt>

It *is* case-sensitive.

If you will indulge me for a few lines, here is a bit of information on finding things on the web - since it's non-QRP, purists will want to hit Delete now.

Perhaps a few notes on how I dug up this information are in order. The first thing to do is get to know the web search engines. I use HotBot ([www.hotbot.com](http://www.hotbot.com)) for most searches. It's almost *too* good - typing in seemingly obscure things produces thousands of references. In the case of Flash Comm, I typed in "flash" and "comm" as the keywords, and of the 10357 matches it found, Flash Comm is the very first one. With practice you can refine your search - you can restrict your search by location and the like, which can be handy. Try also Lycos, Yahoo, WebCrawler, and all the others. Netscape has a Net Search button which takes you to these; I assume other browsers have similar capability.

These search engines all seem to be supported by advertising, and some of it is quite clever. They

also seem to choose ads with your search keywords in mind - why else, for example, would Qualcomm ads pop up when searching for KA9Q's web page, using "qualcomm" as a keyword?

Organisations with large web pages have their own search facility - which makes perfect sense - what good is information if you can't find it? I surmised that the FCC might have something to say about Flash Comm, guessed (correctly) that the FCC's web site was [www.fcc.gov](http://www.fcc.gov), noted a Search function, and used it. Presto - information! Lots of it! Direct from the people themselves!

Sure beats rumours...

We now return you to our regularly scheduled QRP-L. Thank you for your patience with this diversion.

--

Laura Halliday                    "C'est une femme mutine, assez elegante,  
ve7ldh@direct.ca    grave et legere, ayant le sens  
Grid: CN89mg        du confort et du plaisir en tout."  
                              - C. Deneuve

-----

Date: Wed, 23 Jul 1997 11:40:33 -0700  
From: Ed Loranger <we6w@qsl.net>  
To: w7ls@brigadoon.com  
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>  
Subject: [23600] Re: KH6AFS/QRP 40m  
Message-ID: <33D65021.24D3@qsl.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Big laughs on the four certificates! guffaws!

I'm happy with anything over 1,000 miles per watt.

Looking forward to our pixie-to-pixie accomplishment!

With everything learned and enjoyment of the QRPp experience, the best certificate is what I did after our QRPp QSO -- Entered it in my log book!

72 to all!  
/Ed Loranger

Jim W7LS wrote:

>

> Ed!

> Hey, run the numbers one more time. 673 miles divided by 160 mw =  
> 4,206 miles per watt!!

> You used a quarter watt for your calculation. I measured my Pixie on  
> 80 and got 168 mW using an oscilloscope and a 50 ohm terminator. So many  
> volts peak to peak, 50 ohms, etc, etc... = 168 mW

> So, does this mean you get 4 1,000 miles per watt certificates,  
> stapled in series????

>

> Jim W7LS

>

--

72/73 de we6w qrp es cw ONLY (From non-ham to extra in one day!)

HW-8;OHR-100, Pixie2, Johnson Viking II w/VF0.

QRP-L#1068/Norcal#2227/ARS#275/ARCI#9397 grid CM88ok

mailto:we6w@qsl.net <http://www.qsl.net/we6w>

-----  
Date: Wed, 23 Jul 1997 14:44:41 -0400 (EDT)

From: Jim Eshleman <lujce@hooch.CC.Lehigh.EDU>

To: jaevans@codenet.net

Cc: qrp-l@Lehigh.EDU

Subject: [23601] Re: CALLS2DIST via qrp-l listserver

Message-ID: <97Jul23.144442-0400\_edt.10407-21804+2@hooch.cc.Lehigh.EDU>

Content-Type: text

> Is the great circle distance email service broken or is it me ??

> Is there an alternative service/calculator??

John,

CALLS2DIST connects to the UALR callsign server to obtain address info,  
and the UMich geo server to obtain geographic (lat/long) data. It appears  
the UALR callsign server is down at the moment.

73

Jim N3VXI

-----

Date: Wed, 23 Jul 97 16:32:21 UT  
From: "Ed Manuel" <n5em-qrp@msn.com>  
To: N9DD@aol.com  
Cc: "QRP-L Remailer" <qrp-l@Lehigh.EDU>  
Subject: [23602] RE: Flash Comm Inc. allowed to use spectrum  
Message-ID: <UPMAIL15.199707231848290510@msn.com>

Not to mention a readily available, endless supply of free HF antennas,  
stocked at virtually any parking lot near an Interstate Highway.

Ed, N5EM

-----Original Message-----

From: owner-qrp-l@Lehigh.EDU On Behalf Of N9DD@aol.com  
Sent: Tuesday, July 22, 1997 12:33 PM  
To: Low Power Amateur Radio Discussion  
Subject: Re: Flash Comm Inc. allowed to use spectrum

In a message dated 97-07-22 10:56:46 EDT, you write:

Just think about it... Hundreds of thousands of low powered shortwave  
transmitters and receivers being commercially produced for this service. New  
components? Surplus equipment availability? Who will be the first to convert  
one of these vehicle transmitters or receivers to 7.040 MHz CW???

Tom Frisz N9DD  
South Bend, IN  
N9DD@aol.com

-----  
Date: Wed, 23 Jul 1997 13:22:10 -0600  
From: John Evans - N0HJ <jaevans@codenet.net>  
To: qrp-l@Lehigh.EDU  
Subject: [23603] CALLS2DIST now operational  
Message-ID: <33D659E2.34A3@codenet.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Greetings,

UALR had a problem which is now fixed - it took a sysadmin to  
sysadmin communique, which is often the case - tell the right folks  
about the problem and it gets fixed!!!



5. Hamming, R.W., "NUMERICAL METHODS FOR SCIENTISTS AND ENGINEERS," Dover, 1986, pbk, VG+  
\$12.50
6. Hund, August, "HIGH FREQUENCY MEASUREMENTS," McGraw Hill, 1933, 1st ed., 2nd printing, G/G+ with very little wear.  
\$20.00
7. LePage, Wilbur R., "COMPLEX VARIABLES AND THE LAPLACE TRANSFORM FOR ENGINEERS," Dover, 1980, pbk VG+  
\$7.50
8. Milne-Thompson, L.M., "JACOBIAN ELLIPTIC FUNCTION TABLES," Dover, 1950, pbk, G  
\$7.50
9. Schwartz, Mischa, "INFORMATION TRANSMISSION, MODULATION, AND NOISE," McGraw-Hill, 1959, G/G+ with owner's markings inside cover and on page ends.  
\$12.50
10. Terman, Frederick E., "FUNDAMENTALS OF RADIO," 1st ed., 14th printing, McGraw-Hill, 1938, G-/G with very little wear, owner's signature inside front cover.  
\$25.00
11. Terman, Freckerick E., "RADIO ENGINEER'S HANDBOOK," 1st ed., 9th printing, McGraw-Hill, 1943, F+/G- with small tear on spine, wear on top and bottom of spine, owner's inscription inside front cover.  
\$25.00
12. Van Valkenburg, M.E., "NETWORK ANALYSIS," Prentice-Hall, 1955, hbk, G- with wear on edges and students notes inside both covers.  
\$15.00
13. Walston, Joseph A. and John R. Miller, "TRANSISTOR CIRCUIT DESIGN," McGraw-Hill/Texas Instruments, 1963, hbk, G/G+ with owner's inscription inside front cover.  
\$12.50
14. Walston, Joseph A. and John R. Miller, "TRANSISTOR CIRCUIT DESIGN," McGraw-Hill/Texas Instruments, 1963, hbk, G/G+ with marks inside front cover and small stain on front cover.  
\$12.50



[illegible]

Chris Trask / N7ZWY  
Principal Engineer  
ATG Design Services  
P.O. Box 25240  
Tempe, Arizona 85285-5240

Email: [ctrask@primenet.com](mailto:ctrask@primenet.com)

-----

de W3GX  
John Foote

-----  
Date: Wed, 23 Jul 1997 16:05:29 EDT  
From: haf47@juno.com (Howard Friedman)  
To: GBB1@MARISTB.MARIST.EDU  
Cc: qrp-1@Lehigh.EDU  
Subject: [23606] Re: Ham Sticks Ant?  
Message-ID: <19970723.160156.7823.2.HAF47@juno.com>

Hi Father,

I noted with interest what you were told about Hamstick radiation....I'm certainly not an antenna expert, but I don't see why (configured as a dipole) they would radiate off the ends dominantly.

I have used Hamsticks as dipoles with great success. An adaptor was available at one time to allow for making two of them into a dipole, but the last few years this doesn't seem to be available anymore (to my knowlege).

I make my own shortened dipoles using 3/4 inch PVC with a "tee" adaptor in the middle and end caps on the ends used to hold 18 inches of brazing rod on each end for the capacitance hats. I have used "zip" cord for the coils after pulling the conductors apart.

If the antenna is made for an individual band it works surprisingly well although as with all shortened antennas it has a very limited bandspread...80 kHz or so on 40M with 2 to 1 SWR.... 35 kHz on 80M....but who cares, if its the only way you might be able to get on the air, that makes it a great antenna. Using a tuner to reasonate this antenna on all bands works as far as getting a good match goes, but in my experience, it makes the antenna really, really inefficient, just slightly better than a dummy load...your experience may differ.

At a cost of about 50 dollars for two new hamsticks with shipping, making your own shortened dipole (for 15 dollars) is a worthwhile effort....only takes about an hour to construct.

More info available if interested...73, Howie

WA2AFD  
haf47@juno.com

On Mon, 21 Jul 1997 23:20:48 EDT "Bowes, Fr. Bruce"  
<GBB1@MARISTB.MARIST.EDU> writes:  
>Anybody tried Ham Sticks as an dipole? I would be interested in your

>comments. Someone said they radiate off the ends not broadside. I was  
>thinking about using them as a rotatable dipole.  
>Thanks for your thoughts.  
>Fr Bowes  
>  
>

-----  
Date: Wed, 23 Jul 1997 13:19:11 -0700  
From: The Boices <boice@bigfoot.com>  
To: henmel@worldnet.att.net, "Low Power Amateur Radio Discussion" <qrp-  
l@Lehigh.EDU>  
Subject: [23607] Re: ZM-1  
Message-ID: <1.5.4.32.19970723201911.006721f8@popd.ix.netcom.com>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

At 05:21 PM 7/22/97 -0700, Norm Melick wrote:  
>For my next project, I am looking at the ZM-1 Auto tuner by Emtech.

Sweet unit. I bought one last winter, and it went together in a snap. In fact it was so fast & easy, it took a serious effort to stop for the night to let the clear spray coat I put on the face panel time to dry before I mounted everything to it. At the same time, I also bought one of his Ladder Grabbers, for securely attaching ladder line to antenna elements. It's a fine piece of equipment, and I need to get a couple more.

I recently purchased an Autek RF-1 RF Analyzer (another sweet unit), and have begun using it in conjunction with the ZM-1 to see what bands I can load up my various antennas on. The ZM-1 works great for this. It tunes sharply (extremely sharp in some cases), but usually gives a reasonable bandwidth for your efforts.

You won't go wrong with a ZM-1 (not to mention the fact that Roy Gregson - Emtech's owner - is a great guy).

And, no, I don't get nuthin' for free or at discount. Just a happy ham.

73,  
mike KD0FX  
Richland WA

-----

Date: Wed, 23 Jul 97 14:25:11 MDT  
From: af852@rgfn.epcc.Edu (William R Colbert)  
To: qrp-l@Lehigh.EDU  
Subject: [23608] QRPp  
Message-ID: <9707232025.AA16226@rgfn.epcc.Edu>

Hot Dog!! The Pony Express just arrived a few minutes ago with the summer issue of QRPp. Another great issue - Thanks Doug, Jim, Paul, and others that made this possible. The articles and photos look just great. Now for more in-depth reading of this quarter's issue.  
73 Ray

--

Ray Colbert, W5XE  
00TC 3618, SOWP 1064M  
El Paso, Tx (Far West Texas)  
(also: v31xe@dzdn.com)

-----

Date: Wed, 23 Jul 1997 07:28:49 EDT  
From: k5zty@juno.com (WILLIAM A STIETENROTH)  
To: k3tks@u1.abs.net  
Cc: qrp-l@Lehigh.EDU  
Subject: [23609] Re: QRP Quarterly Arrived - NE-QRP '72' Dead?  
Message-ID: <19970723.112618.5231.0.k5zty@juno.com>

Danny and Others,

Let me add one more great magazine to the list of must have QRP reading. The Low Down from the Colorado QRP club with Paul Harden as Technical editor and L.B. Cebik 's, Antennas From The Ground Up, rates second to none. CQC also sponsors a couple of the best contests of the year. This is also a must membership for the complete QRPer. It is published bi-monthly also, dont have to wait so long for the next one. Dues just went up to \$12./year. Still cheap. I don't see how they do it.

72,  
Bill, K5ZTY  
Houston, TX  
k5zty@juno.com  
WITHOUT CW, IT'S JUST CB  
ARCI 8817, CQC 178, NOR-CAL 1321, MI 1472, NE 440  
QRP-L 473

-----  
Date: Wed, 23 Jul 1997 13:56:07 -0700  
From: Ed Loranger <we6w@qsl.net>  
To: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>  
Cc: we6w@qsl.net  
Subject: [23610] As Promised: RESONANT SPEAKERS for CW!  
Message-ID: <33D66FE6.5AC9@qsl.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Good Day QRP-l'ers!

Well, haven't seen a bunch of formulas so I've gotta come clean with the information I promised!

So for morse code it is desireable to have a speaker with improved response at a certain frequency, hopefully the audible frequency matching a fixed offset RX. Or well within a rig's particular RIT range.

The following was extracted from a April 1983, QST article.

"Electro-Acoustic CW Filter", Adapted from a similar article appearing in Oct. 1980, "Radio Communication (RSGB).

Please look for these for more complete information.

The following is my verbage, and is not intended to be a transcript of aforementioned articles. Rather it is representative of general knowledge obtained from said articles and Radio reference material. Including information used by me, to design resonant mufflers for performance motorcycles. (A past life of mine :).)

Concept: A speaker, mounted to radiate into a closed cylinder of certain dimensions will have improved response at audio frequencies associated with the audio 1/4 wavelength resonance of said closed tube. Peaks will occur at ODD multiples of the First harmonic, or fundamental.

Although I have built and designed an open tubed audio "shotgun Microphone", I will detail only "closed end" resonance formulae.

General formula for the resonator:

$$F = (V / (4 * (\text{length} + .3 * \text{Diameter}))) * \text{SQRT}(1 + \text{Temp\_kelvin} / 273)$$

F=1/4 wave audio frequency

V=330 Meters/Second Speed of Sound

length=Tube Length in Meters

Diameter=Tube inner diameter in Meters

Temp\_Kelvin= Temperature in units Kelvin.

Simplifying at Temp\_kelvin=293 we get:

$$F = 122.4 / (\text{length} + (.3 * \text{Diameter})) \quad \text{Parenthesis for Clarity.}$$

So..... I have an empty can of Bugler (tm) tobacco lying around the garage, my speaker fits right on top and can be taped on.

What is the Resonant Frequency?

Measurements of Can:

length= 140 mm or .14 Meters

Diameter= 95 mm or .095 Meters

Note: If you measure in Inches convert directly

to meters: I.E. 3.75 inches \* .0254 (Meters/Inch)= .095 Meters.

$$122.4 / (.14 + (.3 * .095)) = 726 \text{ Hz} \text{ !!!!!}$$

Success! Just for kicks, take a 3-1/2 inch speaker and set it in a tube with these dimensions and you'll notice SIGNIFICANT improvement around 700 Hz.

To go ALL the way: Build a harmonic audio filter that removes the 3rd and 5th etc. odd harmonics.

The passive harmonic is contained in the article.

FINALLY: For real good performance, substitute a glass or very stiff metal tube. There are a lot of losses in the flexible sidewall of the Bugler (tm) can -- which broadens the frequency response too much.

You can put little holes in the tube near the speaker end without affecting the performance significantly.

My daily contribution.

Enjoy!!!

-Ed Loranger

--

72/73 de we6w qrp es cw ONLY (From non-ham to extra in one day!)

HW-8;OHR-100, Pixie2, Johnson Viking II w/VFO.

QRP-L#1068/Norcal#2227/ARS#275/ARCI#9397 grid CM88ok

mailto:we6w@qsl.net <http://www.qsl.net/we6w>

-----  
Date: Wed, 23 Jul 1997 16:39:46 -0700

From: n4oln@juno.com

To: qrp-l@Lehigh.EDU

Subject: [23611] Hamfests and Conventions this w/e

Message-ID: <19970723.163952.10638.0.n4oln@juno.com>

Sould be a good resource for parts. 73's Gary-N40LN

I use to be a Bobwhite and a good old Bobwhite too.

----- Begin forwarded message -----

From: gal@nccmail.attmail.com (Gary Lindemann)

To: n4oln@juno.com

Subject: Hamfests and Conventions this w/e

Date: Wed, 23 Jul 1997 13:46:02 -0500

Message-ID: <PMX-TERM-2.2a-nccmail-gal-1732>

July 25-26

+ Milton ARC, Milton, FL

Mark McAnally, KE4QKN

5740 Janet St., Milton, FL 32570-8228

904-626-7686

E-mail: KE4QKN@AOL.COM

July 25-26

+ Central Oklahoma Radio Amateurs, Oklahoma City, OK

Hal Miller, KB1ZQ

4216 Spiva Dr., Del City, OK 73115-4424

405-672-7735

E-mail: n1lpn@swbell.net

<http://www.geocities.com/heartland/7332>

July 25-27

\* Arizona State Convention, Flagstaff, AZ

John Lanza, KC7IM

PO Box 32756, Phoenix, AZ 85064-2756

602-440-2039

E-mail: arcathill@aol.com

<http://www.geocities.com/RainForest/2425/tuthill.htm>

July 25-27

- x Pacific NW DX Convention, Richmond, British Columbia  
BC DX Club & Fraser Valley DX Club  
Allan Buckshon, VE7SZ  
24059 65th Ave., Langley, BC V2Y 2H1  
E-mail: abucksho@direct.ca

July 25-27

- x Regina ARA, Regina, Saskatchewan  
Doug Richardson, VE5CMA  
306-789-2254  
VE5CMA@VE5RRG.#SCSK.SK.CAN.NOAM  
E-mail: ve5cma@hotmail.com  
<http://www.cableregina.com/nonprofits/hamfest97/>

July 26

- x USF Hamfest, Tampa, FL  
William T. Douglass, Jr., KD4HVC  
813-974-2253  
E-mail: USFREC@eng.usf.edu  
<http://www.eng.usf.edu/studorgs/radio>

July 26

- x Rockford ARA, Pecatonica, IL  
Marsha Plasters, KB9NGN  
3408 Ed-Vera Dr., Rockford, IL 61109  
815-399-9233  
E-mail: wa9ffl@aol.com

July 26

- + Western Carolina ARS, Waynesville, NC  
Thomas Queen, K4BNP  
12 Lynwood Circle, Asheville, NC 28806  
704-258-2639

July 26

- + Berwick ARS, Nescopeck, PA  
Richard Conklin, WC3H  
410 Bissetts Ln., Bloomsburg, PA 17815  
717-387-6759  
E-mail: tattoo@ptd.net

July 26-27

- x Deuel County ARC, Clear Lake, SD  
Dan Kelly, WA0YIN  
PO Box 742, Clear Lake, SD 57226



605-874-2701  
E-mail: [dkelly@itctel.com](mailto:dkelly@itctel.com)  
<http://brookings.itctel.com/~narv/dcarc.html>

July 27

+ Baltimore RA Television Society, Timonium, MD  
Robert Koblish, N3HAT  
PO Box 5915, Baltimore, MD 21282  
410-467-4634  
E-mail: brats@smart.net  
<http://www.smart.net/~brats>

July 27

+ Racine Megacycle Club, Racine, WI  
David Voss, WB9USI  
3333 Standish Lane, Racine, WI 53405  
414-554-7565

----- End forwarded message -----

Date: Wed, 23 Jul 1997 14:03:33 -0700  
From: Ed Loranger <we6w@qsl.net>  
To: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>, we6w@qsl.net  
Subject: [23612] Re: As Promised: RESONANT SPEAKERS for CW!  
Message-ID: <33D671A5.6C4D@qsl.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Ed Loranger wrote:

```
> To go ALL the way: Build a harmonic audio filter  
> that removes the 3rd and 5th etc. odd harmonics.  
>  
> The passive harmonic is contained in the article.  
^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^  
Should Be:  
The passive harmonic filter design is contained in ...
```

Sri/Ed L.

>  
Oh, This is important:

> FINALLY: For real good performance, substitute a  
> glass or very stiff metal tube. There are a lot  
> of losses in the flexible sidewall of the Bugler (tm)  
> can -- which broadens the frequency response too  
> much.  
>  
> You can put little holes in the tube near the speaker  
> end without affecting the performance significantly.  
>

--

72/73 de we6w qrp es cw ONLY (From non-ham to extra in one day!)  
HW-8;OHR-100, Pixie2, Johnson Viking II w/VFO.  
QRP-L#1068/Norcal#2227/ARS#275/ARCI#9397 grid CM88ok  
mailto:we6w@qsl.net <http://www.qsl.net/we6w>

-----  
Date: Wed, 23 Jul 1997 17:11:29 -0400  
From: "Harold Brian Robinson" <robinson@plhp002.comm.mot.com>  
To: haf47@juno.com, "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>  
Subject: [23613] Re: Ham Sticks Ant?  
Message-ID: <9707231711.ZM21496@plhp190.comm.mot.com>  
Mime-Version: 1.0  
Content-Type: text/plain; charset=us-ascii

Valor still makes the little adapter to make a dipole - its just a bracket that will mount both units.

I have had similar results to yours - the 40m pair makes an excellent match on 10m (better than the 10m pair), but does not seem to be doing much.

I used the bracket, and took one stick to the center and one stick to ground. It seems that you have tied both centers to the coax - did I read that correctly?

73 N3GDE Brian Robinson

On Jul 23, 4:05pm, Howard Friedman wrote:

> Subject: Re: Ham Sticks Ant?  
> Hi Father,  
>  
> I noted with interest what you were told about Hamstick radiation....I'm  
> certainly not an antenna expert, but I don't see why (configured as a  
> dipole) they would radiate off the ends dominantly.

>  
> I have used Hamsticks as dipoles with great success. An adaptor was  
> available at one time to allow for making two of them into a dipole, but  
> the last few years this doesn't seem to be available anymore (to my  
> knowlege).  
>  
> I make my own shortened dipoles using 3/4 inch PVC with a "tee" adaptor  
> in the middle and end caps on the ends used to hold 18 inches of brazing  
> rod on each end for the capacitance hats. I have used "zip" cord for the  
> coils after pulling the conductors apart.  
>  
> If the antenna is made for an individual band it works surprisingly well  
> although as with all shortened antennas it has a very limited  
> bandspread...80 kHz or so on 40M with 2 to 1 SWR.... 35 kHz on 80M....but  
> who cares, if its the only way you might be able to get on the air, that  
> makes it a great antenna. Using a tuner to reasonate this antenna on all  
> bands works as far as getting a good match goes, but in my experience, it  
> makes the antenna really, really inefficient, just slightly better than a  
> dummy load...your experience may differ.  
>  
> At a cost of about 50 dollars for two new hamsticks with shipping, making  
> your own shortened dipole (for 15 dollars) is a worthwhile effort....only  
> takes about an hour to construct.  
>  
> More info available if interested...73, Howie  
>  
>  
> WA2AFD  
> haf47@juno.com  
>  
> On Mon, 21 Jul 1997 23:20:48 EDT "Bowes, Fr. Bruce"  
> <GBB1@MARISTB.MARIST.EDU> writes:  
> >Anybody tried Ham Sticks as an dipole? I would be interested in your  
> >comments. Someone said they radiate off the ends not broadside. I was  
> >thinking about using them as a rotatable dipole.  
> >Thanks for your thoughts.  
> >Fr Bowes  
> >  
> >  
>  
>-- End of excerpt from Howard Friedman

-----  
Date: Wed, 23 Jul 1997 17:19:53 +0000 (GMT)

From: Jim Glover <psykey@okcforum.org>  
To: qrp-1@Lehigh.EDU  
Subject: [23614] Ease of making contacts proportional to power?  
Message-ID: <199707231719.RAA12337@okcforum.org>  
Content-Type: text

Hello..

I joined qrp-1 because after attending the hamfest this weekend here in Oklahoma City, I plan to build an HF transmitter (unless I get lucky and come home with some sort of cheap HF transmitter from the hamfest). I'm not necessarily interested in limiting power to no more than 5W per se, but I do note that many projects for easily constructed homebrew transmitters are in that power range. It's because I plan to build my own simple homebrew transmitter that I've decided to join qrp-1, and not because I'm particularly interested in using particularly low power.

There are tube designs with output powers around 50 watts, give or take, so it's possible to get another 10 dB beyond the usual 5W upper limit for QRP, by choosing to build a simple tube-type transmitter, rather than a transistor type. Such a transmitter would have a signal only 3 dB below that of a 100-watt station.

I understand that many QRPers enjoy the challenge of making contacts using low power, and consider that thrill an important part of the pay-off. I may develop a taste for that myself, but for now, my goal is to get an HF station on the air as inexpensively as possible--or let's say, as inexpensively as I can, and still have a reasonably effective HF station (in general, as opposed to "reasonably effective, considering that it's QRP").

No one seems to come right out and say one way or another, but a lot of the stuff I've read about operating QRP seems to sort of hint that when power is low, the contacts are few and far between--something to be really proud of on the rare occasion when it happens at all. I can imagine that it could be a lot of fun to pursue the challenge of making contacts which are difficult to make, but I can also imagine that first and foremost, I'd like to have a station capable of making contacts on a fairly regular basis. To put it another way, I'd like to sit down for an hour or two of HF operation thinking, "I wonder who I'll contact this evening?" rather than, "I wonder if I'll get lucky and contact anyone at all, this evening?"

My antenna will be about 70 feet of wire at about 15 feet

above the ground, end-fed with balanced line. (a Zepp)  
I'll probably be using a homebrew antenna tuner. I'll  
probably choose between 40 meters and 30 meters as the  
first band to get working.

My question: Could I expect to make contacts on a fairly  
regular basis with just 5W of output...or would making a  
contact be a rare treat? (To be more specific, should  
I expect to make contacts more often than not when I  
sit down, if the band is open, or, should I expect to  
get lucky once a week or so, or what?)

Whatever I decide to do, I'm bound to be homebrewing at  
least some of it, and may very well go with low power,  
if it seems I can do so without sacrificing too much  
ease of making contacts. I'm looking forward to enjoying  
the related discussions here on qrp-l!

--Jim WB5UDE

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Date: Wed, 23 Jul 1997 18:30:44 -0400  
From: Hank Kohl <k8dd@contesting.com>  
To: qrp-l@Lehigh.EDU  
Subject: [23615] Re: UPS Batteries  
Message-ID: <2.2.32.19970723223044.006cccc@tir.com>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

At 10:13 AM 7/23/97 -0300, VE1VQ wrote:

>

>I have found that in a good many cases it is the batteries that have failed  
>(just from the time in service). And for the price of a replacement set of  
>batteries you can have a UPS for your computer stuff. Although like a lot  
>of things it is probably cheaper to buy the entire unit than a part.

>

Most of the time when a UPS will not switch over to batteries when the mains  
go out, usually 5-10% of the batteries have quit taking a charge and therefore  
there is not enough battery voltage to kick in the inverters.

To find the bad batteries, I take a car sealed beam and clip it and a volt  
meter across the battery for one to two minutes. If the battery goes below  
11 volts DC, it's bad. Most customers want the bad batteries replaced and  
leave the rest in. Bad choice!

Of the batteries left, within six months a couple will cease to charge, the UPS won't switch over to battery. Do the sealed beam test, find the bad ones, at the customers wish (no make that demand) replace the bad ones.

Only way to go is replace all of them! Get a good fairly matched set in the UPS. This means two people are really happy. The customer, because they have a good set of batteries that will last for about 5 years. Me, because I have bunch of 12 volt batteries ranging from 10 AH to 38 AH, depending on the UPS they came out of! And, if it is winter, a lot of weight in the trunk to make it through the Michigan snows (yes, I drive a real rear wheel drive car!).

Care and charging those sealed lead acid batteries is a different story, but that's been beat to death on here enough. Carefully sums it up.

73 Hank K8DD

\*/ Hank Kohl K8DD k8dd@contesting.com  
\*/ ARRL TS (k8dd@tir.com)  
\*/ MI-QRP - Vice Pres. QRP-ARCI - Director  
\*/ G-QRP ARRL/LM QCWA/LM QCAO/LM

-----  
Date: Wed, 23 Jul 1997 15:56:54 -0700  
From: Ed Loranger <we6w@qsl.net>  
To: psykey@okcforum.org  
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>  
Subject: [23616] Re: Ease of making contacts proportional to power?  
Message-ID: <33D68C36.5EC1@qsl.net>  
Mime-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

Jim, Jim, Jim.....

Whoa boy. Too Fast.

First of all, A generous and open-armed welcome to the QRP-L list. You made an excellent decision.

Let me say about wattage:

I have hundreds of contacts with less than 5 watts. Even a few 1.5 watters to New York from here on the West Coast in California.

I don't know if 50 watts to a 15 foot zepp dipole would beat this. Why? Because it's not just low power operation -- we're "OPTIMIZING" WITH Low Power! Big difference.

Does a white hot antenna, all heated up with 1500 watts pure narrow band CW mean you are "Gettin' out?"

OK 1500 watts and you reach Zambia. Later you find your neighbor Ham Q. Operator, got Zambia on 100 watts. Now you start looking at your set-up.....

But without Ham Q. Operator's competition, you most likely wouldn't know that 1400 watts were just heating up the house! So you go up on the roof and find the antenna leaning and the wrong length, touching the roof drain, etc... and fix it.

Make it all work excellent at low power, then if you so desire, QRO yourself MUCH Further, with the efficient set-up!

FINALLY: To answer your question, get your dipole up 1/2 wavelength and use some open-wire feeders. There are many Resonant and Anti-resonant antenna designs and feed methods that work well. NO trees or tower? Try a bobtail curtain.

Go as low as 1/4 wavelength in height, you'll get out just fine -- but your main antenna lobe will be warming the clouds when using a dipole.

I wish you the very best.  
-Ed Loranger  
--

72/73 de we6w qrp es cw ONLY (From non-ham to extra in one day!)  
HW-8;OHR-100, Pixie2, Johnson Viking II w/VFO.  
QRP-L#1068/Norcal#2227/ARS#275/ARCI#9397 grid CM88ok  
mailto:we6w@qsl.net <http://www.qsl.net/we6w>

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End of QRP-L Digest 796  
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